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PLUS Mac OS X Snow Leopard unleashed



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AN ADMISSION OF DEFEAT OR AN ASSAULT on the market? However you view the new iPhone's hiked specs and slashed price, one thing is for sure: Apple's mobile phone has come of age. Rivals ought to be worried.

In fairness, it should have been a 3G device from the start, and it would have been had the 3G chipset not been so greedy. Jobs cited its insatiable appetite for battery power as the reason for settling with the less ravenous 2.5G in the first release, to the slight disappointment of European consumers. In the US, of course, it's a moot point, as 2.5G Edge technology was already prevalent, but in the UK and Europe it must have given the networks some cause for thought.

It's less than a decade since the UK mobile market paid an unprecedented £22.5 billion for the rights to lease five 3G licences from the government. BT Cellnet took licence C for a little over £4 billion. Cellnet became mmO2, latterly O2, and was then sold off to its current owner, Spanish operator Telefónica, for £17.7 billion. How this price was agreed at is up for debate, but you can bet that expensive 3G license was a factor.

So it must have been galling to discover that the only way it could win the exclusive rights to carry the iPhone in the UK was to then roll out Edge coverage for a minimum 30% of the national population (which would appear to include only half of my house). No doubt it did this in the knowledge that a 3G iPhone was in the works. Even if Apple didn't tell it, its business analysts must have done.

Perhaps it thought that the cost was worth it, for the rights to get first refusal on the second edition. If so, it was a good call. If iPhone 3G was nothing more than a network enhancement, chances of mass uptake would be slim, but by slashing the price, giving it proper over-the-air syncing with MobileMe (bye-bye .Mac – you won't be missed) and building in new features like GPS integration with Google Maps and a fully-fledged application download store, Apple has all but sealed the smartphone market for itself and its network partners.

O2 and its ilk clearly took the long view when it came to the iPhone. Perhaps the rest of us should have done the same, and held off for the first proper hardware update. At least we can opt for an upgrade at the cost of a contract extension. ☒

Nik Rawlinson is the editor. This issue, he's ordered the chicken coop, ready for the ladies' arrival at the start of July. Send your quiche and omelette recipes this way.

iPhone taken to the 3G level

The iPhone has finally come of age with the release of the new 3G model – great news for us, bad news for its rivals.



Words Nik Rawlinson
Image Danny Bird

Reviews

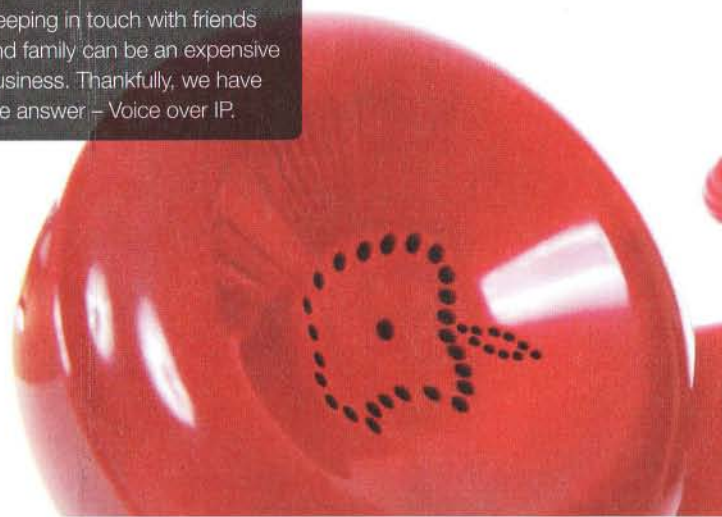
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When P2P sharers are attacked only the lawyers can win

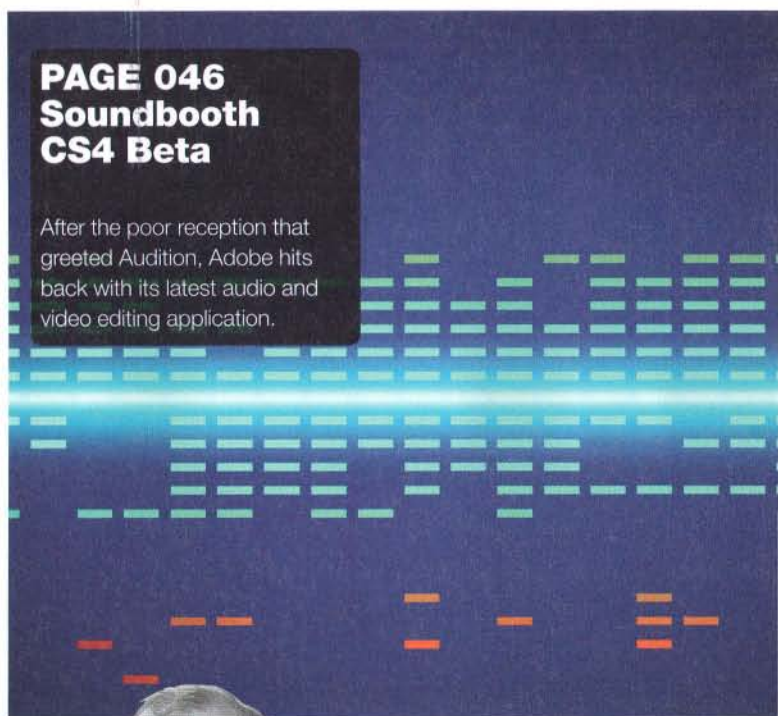
PAGE 050 Free calls for all

Keeping in touch with friends and family can be an expensive business. Thankfully, we have the answer – Voice over IP.



PAGE 046 Soundbooth CS4 Beta

After the poor reception that greeted Audition, Adobe hits back with its latest audio and video editing application.

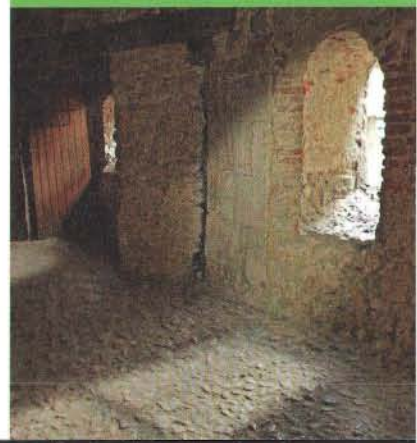


PAGE 100 The Works

Check out our Q&A section on p101, where tech guru Howard Oakley will continue to answer your questions. This issue, our Mac business section looks at the issues surrounding DHCP and whether it's more of a hindrance than a solution.

PAGE 068 L: Light and Shade

This issue, Steve Caplin reaches the letter L as he continues his new journey through essential design tips.





If you aren't using CSS then you're missing out on making your websites simpler and much easier to design.

CS4 is on the way and Adobe has given web designers a taste of what they can expect to find in the upgrade with these betas.

Escape Only the lawyers can win from the file-sharing clampdown.

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BREAKING NEWS

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Apple unveils slimmer and cheaper 3G iPhone

Black at the back and thinner at the edges, the iPhone 3G is, according to chief executive Steve Jobs, 'really nice'. As well as the black, plastic back, it has a flush headphone jack, solid metal buttons and the same 3.5in display as before, while the audio quality has been improved. The 3G performance is a huge improvement over the previous model's Edge and, according to Jobs, is now close to wifi speeds and considerably faster than other 3G phones when browsing the web.

Talktime on 3G is five hours – 'an industry leading amount of time,' Jobs said upon unveiling the device at this year's WWDC developers' conference in San Francisco – and battery life has been improved across the board. 2G talktime is around eight to 10 hours, while video will play for seven hours and music for 24.

GPS also makes its debut, supporting many of the location-based features that developers are building into applications. Google Maps, for example, **Page 009** ➔

WWDC gets first look at Mac OS X Snow Leopard

Apple has given Mac developers a first preview of Snow Leopard, the next generation OS for the Mac. Rather than focusing primarily on new features, Snow Leopard will enhance the performance of Apple's operating system and set a platform for future developments and features. It's optimised for multi-core processors, exploits the power of graphic processing units (GPUs), enables unprecedented amounts of Ram and has a new media platform with QuickTime X.

A new technology code-named Grand Central will enhance support for multi-core processors, which will make it easier for developers to create programs that take advantage of Snow Leopard. It makes the whole operating system multi-processor-aware and optimised for allocating tasks to free processors. By increasing access to a greater number of cores, Mac OS X should do more to increase speed of execution than hiking processor speed.

Meanwhile, Apple's Open Compute Language (OpenCL) lets any program tap into the gigaflops of GPU computing power previously available only to graphics applications. Presently, GPUs will remain largely underused when running general purpose applications as they are optimised for rendering 3D scenes in games and graphics tools. With OpenCL, redundant processing power in the GPU can be redirected to boost processor performance. This is not the first implementation of such a framework. Such 'general-purpose computing on graphics processing units' routines have in the past **Page 009** ➔

▼ As well as being slimmer, the iPhone now has 3G.



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3G iPhone prices are slashed

can now track your movements on the iPhone's screen.

The new phone will be available in the UK on 11 July, and will be cheaper than the 6 million phones Apple has sold to date. O2 will continue to be Apple's iPhone partner in the UK. It will offer the new handset, which comes in capacities of 8GB and 16GB, on a choice of four tariffs.

▼ The 8GB iPhone has a black plastic back.



Image Courtesy of Apple

The 8GB model, which is only available in black, will cost £99 on the £30 and £35 tariffs, and is free to subscribers signing up to tariffs costing £45 or £75. The 16GB model is available in black and, optionally, white. It costs £159 on the £30 and £35 tariffs, and £59 on the £45 tariff. It is free on the £75 rate. O2 has also announced that for the first time, the iPhone will be available on a pay-as-you-go tariff.

Meanwhile, Apple is adding support for viewing iWork and Office documents on the iPhone and iPod touch. Jobs said that the new features will be available when iPhone 2.0 software is released in early July, free to existing iPhone users and at a charge of \$9.95 (about £5) for iPod touch owners who want to add the same functionality to their players.

The upgrade also delivers contact search and support for Japanese and Chinese languages with character recognition.

Jobs also gave more information about the new iTunes App Store, through which new iPhone and iPod touch applications will be sold – or given away.

Applications under 10MB can be downloaded wirelessly, while updates can also be downloaded over mobile or wifi connections. Otherwise they'll sync through iTunes along with all the other content.

Wave goodbye to .Mac, say hello to MobileMe

Apple has unveiled MobileMe, the wireless successor to .Mac. Marketing boss Phil Schiller told the company's developers' conference that the service will allow subscribers to access their information from anywhere on any device.

'Mac, PC, iPhone, it will push information up and down to keep everything up to date all the time,' he said. Email, contact information and calendars all get updated at the same time across all devices.

There is a new webmail system – me.com – which, like the online calendar, looks remarkably similar to the Desktop Mail and iCal applications. The Gallery application is also included, but has been improved, looking a lot like an online version of iPhoto, while iDisk has been retained and enhanced, enabling files to be exchanged within the online applications. Subscribers to .Mac will automatically be upgraded when MobileMe is introduced in July. For new users, the cost will be £59 per year, with family packs serving up to five users costing £89. Additional storage can be purchased for £30 and £59 for 20GB and 40GB respectively.

The change of name, and new domain, is likely to appeal to PC users, whom Apple is increasingly targeting with its software and services since the launch of Windows variants of iTunes and, latterly, Safari.

Apple is selling the service in part as a consumer alternative to Microsoft's Exchange server technology, pushing email and appointments to a range of devices, not restricted to just the iPhone.

Focus on OS X performance

been developed by graphics card manufacturers ATI and Nvidia.

OpenCL is based on the C programming language, and Apple has proposed it as an open standard. With further improvement to Mac OS X's 64-bit technology, Snow Leopard raises the software limit on system memory up to a theoretical 16TB of Ram, which is 500 times more than is possible today.

Using media technology developed initially for the iPhone, QuickTime X is designed to optimise support for modern audio and video formats to provide highly efficient media playback.

Snow Leopard also delivers improvements to Safari, with what Apple claims is 'the fastest implementation of JavaScript ever, increasing performance by 53%'. It is not clear at this stage whether the improvements to Safari will appear in the Windows edition of Apple's browser, or only the Mac OS X variant.

With Snow Leopard, Mac OS X will for the first time provide native support for Microsoft Exchange 2007 in Mail, iCal and Address Book. This is separate to the Exchange-like features touted for the simultaneously announced MobileMe service, which will replace .Mac from July.

'We have delivered more than a thousand new features to Mac OS X in just seven years and Snow Leopard lays the foundation for thousands more,' said Bertrand Serlet, Apple's senior vice president of Software Engineering. 'In our continued effort to deliver the best user experience, we hit the pause button on new features to focus on perfecting the world's most advanced operating system.'

Snow Leopard will ship in about a year, and although system requirements have not yet been announced, Apple's own testing data shows the operating system being trialled on a 2.8GHz Core 2 Duo Intel-based iMac with 2GB of Ram.



▲ MobileMe will enable subscribers to access their information from anywhere and from any device.

Image Courtesy of Apple

Apple pulls out of Paris Expo

Apple has announced that it will not be attending this year's Apple Expo, the Paris-based show. Its withdrawal from the show should not come as a surprise, though. Steve Jobs has not delivered a keynote speech at the event since 2003 when he unveiled a new PowerBook G4, and the last keynote from an Apple executive was in 2004 when senior vice president for worldwide marketing Phil Schiller launched the iMac G5.

Apple is not just turning its back on European Mac shows. Earlier this year, the company announced that it would not be attending April's National Association of Broadcasters trade show in Las Vegas. Previously, the company had used the giant expo to launch

software like Final Cut Studio 2 and even Mac hardware like the first 17in MacBook Pro in April 2006. Latterly, Apple has used either the annual expo, held each January in San Francisco, or its own Worldwide Developers Conference to make product announcements and keynote addresses.

Apple's decision reflects its evolution into what is primarily a consumer electronics company, rather than the producer of computer systems for graphics and video professionals. Also, during calls with analysts, Apple executives have suggested that the company's enormous investment in its expanding chain of Apple Stores means that it's better able to reach customers. At present, the company is working on a giant 7700 square foot Apple Store to open in Paris.

'Year after year, Apple reduces its participation in trade shows because there often exists better means of getting in contact with our clients,' said Apple. 'The growing popularity of the *apple.com* website permits us to directly touch over 100 million clients around the world.'

Although attendance at the Apple Expo in Paris has waned in recent years from a peak of about 90,000 visitors to just 55,000 last year, the show's owner, Reed Exhibitions, has made no statements about ending the show. Given the enormous rise in Mac sales in recent years, there may be a large enough ecosystem of third-party developers and peripheral makers to sustain a Mac-based show, without the support of Apple.



HEROES AND ZEROES

Heroes

Bob Mansfield and Scott Forstall have both been promoted inside Apple this week to bolster the teams working on the Mac and iPhone. That puts them at the forefront of two of the company's most important divisions, so they'll both have a big say in what we use in the future. Let's hope they continue as heroes – and not zeroes – in their new roles.

Zeroes

In the run up to Steve Jobs' WWDC keynote, the web was rife with the usual rumour rubbish and faked product shots. It's getting tiring, guys...

MACUSER NEWS

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Send reader letters to mailbox@macuser.co.uk



▲ Apple announced that it won't be attending this year's Apple Expo.



OVERHEARD

'We will outsell the iPhone, we will outsell the BlackBerry.'

Microsoft's Robbie Bach is confident Windows Mobile will triumph in the final count-up.

'Steve is all about being on the team and being committed to the mutual goals. So I had to figure out, what are my behaviours that don't reinforce that? What is it about sarcasm in a meeting? Or just going, "This is completely screwed up"?''

Bill Gates reveals how he differs from Microsoft CEO Steve Ballmer and why the two had a serious bust up in 2000.

Record market share for Mac OS X

A record number of people are using Macs

online, according to the latest figures on web traffic by Net Applications. The company's statistics represent the web habits of 'dozens of countries in regions including North America, South America, Western Europe, Australia/Pacific Rim and Parts of Asia'.

It found that during May, Mac OS X's share of web traffic hit 7.83%. Meanwhile, the combined share for all versions of Windows fell to a new low from 95.25% to 91.13%. As recently as August 2006, Mac OS X's share was 4.3%, meaning that there has been an 82% rise in its usage online. The Mac's market share may still be small compared to Windows, but at current rates of growth it will soon be into double figures.

Net Applications also tracks web traffic from handheld devices and the iPhone's share of users during May was 0.16%, up from 0.13% in January 2008. Add the Mac OS X-based iPhone share to that of the Mac and the combined share is 8%.

Its research also shows that Apple is making steady progress on the browser front. Safari's market share reached a new high of 6.25%, which is nearly double its June 2006 market share of 3.19%. Windows Safari users during May 2008 accounted for a 0.28% market share, compared to a 5.99% user share for Mac Safari users.

The ascent of the Firefox browser, which is available for both Mac and Windows platforms is even more impressive – it accounted for 18.41% of browser traffic during May 2008, compared to 10.77% during June 2006.

Faced with the combined assault from Firefox and Safari, Internet Explorer's user share has plummeted from 84.11% in June 2006 down to a new low of just 73.75% during May 2008. After a period earlier this decade when it had a market share of 95% and the browser wars were declared dead, IE faces the first browser war since it triumphed over Netscape Navigator in the 1990s.

Next-generation broadband could boost UK economy

Moving to 'next-generation broadband' could deliver huge benefits to the UK economy, but telecoms companies should wait before deploying new technology, according to Government advisors.

The Broadband Stakeholder Group (BSG), which describes itself as the UK Government's leading advisory group on broadband, says: 'The UK could reap significant social and economic value from the widespread deployment of next-generation broadband.' It estimates that introducing high-speed technology such as fibre-to-the-cabinet and fibre-to-the-home to 80% of the country's homes could cost £16 billion. But it claims that 'benefits to the UK associated with the wide-scale deployment could outweigh the cost of deployment'.

BT has long argued that it can't make the business case for a nationwide deployment of fibre-to-the-home, and the report is clearly sympathetic to BT's case. It believes that now might not be the right time to invest in the network. 'In the short-term, there are unlikely to be significant costs associated with delaying deployment and there may be considerable value in waiting for a limited period in order for more information to emerge, before investing,' it states.

However, the industry and Government have been warned not to dither. 'On the other hand, the UK can't wait too long,' says BSG CEO Antony Walker. 'If widespread network deployment didn't happen in the

medium term (perhaps three to five years), then this report suggests that the UK could be losing out.'

There's already strong evidence that the UK is losing out, with a report last year claiming that our broadband was among the slowest in Europe with average



▲ BSG's Walker says that the UK shouldn't have to wait too long for faster broadband.

speeds below that of Slovakia and Hungary.

However, in a separate report, the BSG has dismissed the suggestion that Government should part-fund the fibre rollout. 'In our 2007 report... we argued that, although we could see a role for the public sector in the future, the UK market was still in a pre-investment phase and the risks of intervention today outweigh the risks of non-intervention. For this reason we argued that, as a general rule, the public sector should forbear from intervening at this stage. This remains our position.'



MISS IT, MISS OUT

JUNE Digital Photography and Imaging Show

26-27 June
Business Design Centre, London
Show for pro photographers and those working in the photographic industry, with the opportunity to sample latest developments and attend photography seminars.
URL dpishow.com

JULY iTunes Live London Festival 08

1-31 July
Month-long series of free concerts promoted by Apple featuring 60 bands including McFly, James Blunt, CSS and The Ting Tings.
URL ituneslive.co.uk

SEPTEMBER

Apple Expo
16-20 September
Porte de Versailles, Paris, France
European consumer expo showcasing the full gamut of Mac and iPod models and accessories from around the Continent.
URL apple-expo.com/uk

OCTOBER

MacLive Expo
23-25 October
National Hall, Olympia, London
Annual Mac event, attended by exhibitors and visitors from across the country.
URL macliveexpo.co.uk

NOVEMBER

Design + Technology with ICT Education Show
20-22 November
Focusing on using IT in design technology within schools, this show attracts key names like Autodesk and the UK Intellectual Property Office.
URL ichf.co.uk/d+t

Leaked treaty has huge ramifications for iPod owners

Owners of iPods could find themselves detained at airport immigration centres if a little known international treaty, the Anti-Counterfeiting Trade Agreement (ACTA), is enacted.

ACTA is being advanced by a US and EU-led group of industrialised countries, with only music and TV/movie industry lobbyists, and government bodies so far involved in policy discussion. The driving force behind the bill is California congressman Howard Berman, who is known for his close ties to Hollywood and the music industry.

However, several discussion documents relating to ACTA have been leaked and posted on the web by groups including the San Francisco-based IP Justice; an organisation, which campaigns for 'balanced intellectual property laws and free expression'.

'As of 25 March 2008, no draft text has been published yet to provide the public with substance of the proposed international treaty. A *Discussion Paper on a Possible Anti-Counterfeiting Trade Agreement* was reportedly provided to select lobbyists in the intellectual property industry, but not to public interest organisations concerned with the subject matter of the proposed treaty,' claimed IP Justice.

'The proliferation of intellectual property rights (IPR), particularly in the context of counterfeiting and piracy poses an ever-increasing threat to the sustainable development of the world economy,' reads the introduction to a *Discussion Paper on a Possible Anti-Counterfeiting Trade Agreement*.

'Criminal sanctions (in addition to civil, or where applicable, administrative liability) [are] to be applied to IPR infringements on a commercial scale: significant wilful infringements without motivation for financial gain (such as Internet piracy), imports and exports,' recommends the document.

Paragraphs like these have set alarm bells ringing among some industry watchers. 'In effect, the provisions of ACTA could see your iPod, laptop or any other device capable of storing/playing copyrighted media seized and confiscated at the border of a participating country,' warned online journal *Aardvark Daily*. 'If you've legally ripped your CD collection to your iPod or other player, and travel abroad to one of the nations signing up to the ACTA, you will have to take some way of proving that the tracks on that device have not been copied illegally,' it claimed.

'Just about the only way I can think of to do this is to take the original CDs with you as well. Imagine how impractical that is on an 8GB player loaded to the gills with legally ripped tracks. And what if you perform your own music and have a fist-full of self-produced tracks? How on earth do you prove that they are legit and not pirated?' asked *Aardvark* editorial.

The ACTA discussion document will be considered at July's G8 summit in Japan.

Virgin Media opens campaign against illegal file sharers

Virgin Media and the BPI are to begin sending warning letters to Virgin broadband subscribers who they allege have been illegally sharing music files. Confirming plans announced in March, Virgin will send accused customers two letters, its own and one penned by the BPI. The content of the 'informative' letters has not been disclosed

The offending account will be identified on the basis of information supplied to Virgin by the BPI. No personal details will be sent back to the UK music trade group. According to BPI figures, about 6.5 million consumer broadband accounts are used to download music with peer-to-peer software, and in many cases the account holder is unaware, according to BPI chief executive Geoff Taylor.

'Education is absolutely key to reducing the extent of illegal downloading,' he said. 'We believe that new partnerships with ISPs can help build an Internet in which music is properly valued.'

A Virgin spokesperson said: 'We want people to enjoy music online without infringing the rights of musicians and music companies. This campaign is about helping our customers understand how they can do this.' But the ISP is not yet threatening to disconnect persistent sharers.

The BPI is among a number of music industry bodies pressing all ISPs to follow suit. The UK government has warned that unless they take voluntary action, it will legislate. Business minister Shriti Vadera urged other ISPs to follow Virgin's lead. 'This is a welcome first step by Virgin and the BPI to educate consumers about unlawful file sharing, which damages our vibrant creative economy,' she said.

Becky Hogge, executive director of the Open Rights Group, said that she welcomes Virgin's commitment not to disconnect its customers, but threatening music fans and Internet users still doesn't look like a good way to make money for musicians. She also believes that such action will drive peer-to-peer users underground.



'A hardcore of file sharers will route around any IP using encryption,' she said. 'Then they'll develop tools for less tech-savvy users to take advantage of encryption. And then we'll be back where we started.'

◀ Geoff Taylor believes that education is key to tackling illegal file sharing.

WITH THE LAUNCH OF THE NEW 3G iPhone at the WWDC out of the way, thoughts have begun to turn towards what Apple has in store for Snow Leopard – its Mac OS X upgrade. Interestingly, the mix of rumours and predictions currently swirling around the web do not contain many suggestions for new features.

That's either testament to just how feature-filled the last few Mac OS X upgrades have been, or a sign that only Apple's engineers have the vision to cook up innovations that we haven't even thought about.

On the other hand, it could be that Apple's development resources are now focused on innovating the newer iPhone platform, or some new, as yet unknown, platform. Alternatively, it could be that Microsoft's problems with Windows Vista mean that Apple can afford to take its foot off

the gas, just as Microsoft stopped improving Internet Explorer, when the browser market went quiet.

The most likely scenario is that after the hectic pace of feature introduction and interface upgrade, Apple has realised that a period of reconciliation might be for the best. Mac OS X still suffers from all kinds of irritations, some minor, such as the way Desktop icons sometimes do not stay

where you put them in between start-ups, and more serious problems involving networking and interminable spinning beachballs. Mac OS X is also likely to suffer a far more concerted malware onslaught as Mac market share rises, so a greater focus on security will inevitably be more important.

It's one of the technology paradoxes that while Macs have a well-deserved reputation for longevity – compared to similarly aged PCs – Apple has put much less of a premium on maintaining backwards compatibility than Microsoft has with Windows. As a result Windows Vista has become a bloated mess, while Mac OS X 10.5 has gained a reputation for being relatively speedy and reliable, and technologically more advanced.

To achieve this Apple has been ruthless in its ditching support for legacy hardware (68K, ADB, SCSI, floppy drives) and software (Mac OS 9/Classic). And it's this tendency, which has many industry watchers predicting that the biggest change in Mac OS X 10.6 will be the fact that PowerPC-based Macs will no longer be supported. In other words, the biggest change will be the removal of a feature, not the addition of a new one. ☒

Big cat diary

With the Snow Leopard upgrade on the horizon, you may find a distinct lack of cutting-edge features as Apple concentrates on improving performance.



Words Paul Nesbitt
Image Danny Bird

Paul Nesbitt has never ceased to be amazed by the sheer oddness of Apple over the decade that he has spent writing about its alternating moments of madness and genius for MacUser.

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Over 700 movie downloads finally made available on UK iTunes

iTunes movie downloads have finally arrived in the UK, following Apple's announcement that it is selling content from 'major film studios', including 20th Century Fox, Disney, Paramount, Warner and MGM.

The new service offers more than 700 films for rent or purchase, and Apple has promised that movies will be available on iTunes the same day as their DVD release. 'We're kicking off movies on the iTunes Store in the UK with over 700 films for purchase

and rent,' said Eddy Cue, Apple's vice president of iTunes. 'We think customers in the UK are going to love being able to enjoy their favourite movies on their iPod, iPhone or on a widescreen TV with Apple TV.'

Apple plans to add more movies over the next few months. As with Apple's US service, a rented movie can be watched up to 30 days after it has been downloaded, but once a customer has started watching the film, it has to be finished within 48 hours.

Each rented movie can be viewed multiple times within the time period restrictions.

Apple claims that customers with a good broadband connection should be able to start viewing movies within a few seconds of ordering them, as the movies will continue to load in the background at a faster rate than they are being shown.

Prices are somewhat higher than the equivalents in the US, though. Buying a new movie typically costs £10.99 for new releases, and £6.99 for vintage classics. Buying a new movie in the US costs just \$14.99 (about £7.65), which is about 43% cheaper than here in the UK. Similarly for movie rentals, UK customers pay £3.49 for new movies and £2.49 for classic films compared to \$3.99 (about £2) and \$2.99 (about £1.50) respectively in the US.

Perhaps a more important comparison prospective movie purchasers will consider is how iTunes compares to buying a DVD. For example, *I Am Legend* on DVD has an RRP of £19.99, although it is available new from Amazon for £9.98.

Jupiter Research analyst Michael Gartner claims that iTunes will be appealing enough as an alternative to DVDs to take off. 'What iTunes was to music stores online, it now is to video rentals. This will change how folks rent movies and at the same time, drive more consumers into the Apple ecosystem,' he said.



▲ It's now possible to download the latest movies as well as vintage titles from the UK version of the iTunes Store.

CS3 glitches caused by OS X upgrade

Users of Adobe's Creative Suite 3 (CS3) are complaining that Apple's recent upgrade to Leopard, Mac OS X 10.5.3 is causing a range of glitches and problems, including data loss from the corruption of files.

According to reports on Apple and Adobe online support forums, users cite problems with saving files created in CS3 programs like Photoshop and InDesign to disks on remote servers. The files become corrupted and then are sometimes impossible to open. Some postings on the support forums suggest a workaround of using the Save As command rather than the simple Save command.

Owners of MacBooks and MacBook Pros have also reported that in some cases they are suffering problems with visual artefacts that appear and block large areas of the screen. These bugs were also reported by some Mac portable owners, running 10.5.2, but the huge 420MB 10.5.3 update does not appear to have solved the problem.

Neither Apple nor Adobe has issued statements or fixes for either of the problems, however, reports have emerged that Apple has delivered pre-release copies of 10.5.4 to developers. Early reports indicate that the forthcoming release will fix the CS3 problem.

▼ Apple's upgrade to Mac OS X 10.5.3 has caused some problems with Adobe's Creative Suite 3.



SO, APPLE HAS FINALLY KILLED OFF .MAC. Not before time, it has to be said. The old girl was beyond long in the tooth and was about as relevant in today's shiny, pastel-coloured post Web 2.0 world as it was useful. That is, not very.

Although Apple's loosely cobbled together suite of web services had recently had a bit of a revamp, the new clothes covering .Mac Mail's drooping shoulders couldn't hide its inner frailties. If you haven't had the dubious pleasure of using it in recent months, consider it a blessing. As someone who is regularly confronted by the ever-so-helpful 'unexpected response format' error message when I try to search for email messages in an, admittedly rather full, inbox, I won't be pining away for it when it finally shuffle's off Apple's servers.

Apple never gave the impression that it fully

understood what it was trying to do with .Mac, just as it hadn't with iTools before it. At least iTools and the mac.com email address that went with it were free. When iTools mutated into .Mac, the only way to keep your mac.com address was to subscribe to .Mac (currently £70 a year). That £70 bought you a bunch of other stuff as well as mail, of course, but the trouble was that the other stuff either wasn't particularly useful or didn't work properly.

iDisk was, and for some users outside the US remains, hideously slow. In fact, it was only with the introduction of iDisk syncing – which allows you to keep a local copy of your iDisk on your hard drive and have it sync with the online iDisk at a convenient time – that it became usable at all. Address Book was clumsy, Homepage and photo galleries relics from the late 1990s, and iCards, well did you use them?

The one positive for Apple from .Mac was that there were plenty of us who were enough of a mug to keep paying the annual fee to use it. The good news for us is that we get a free upgrade to MobileMe, Apple's new suite of online services that's geared towards today's cloud computing environment. Why Apple needed to be so literal with the logo is anyone's guess, but at least it gets the message across: today's Apple is all about the cloud. It's a tad unfortunate that Apple's chosen iPhone service provider in the UK, O2, has a trademarked Cloud of its own, but hey what's a little confusion when there's a buzzword bandwagon on the go with a spare seat on it?


To be fair to Apple, MobileMe looks very impressive. Most significantly, it does away with syncing. That alone will be a boon for anyone who has found themselves repeatedly resolving the same conflicts every time they sync. In its place is a kind of

'always-on' syncing whereby any email you send or receive, or any contact or diary event you add is automatically and immediately added to all the devices you have linked to your MobileMe account, be they Mac, PC, iPhone or iPod touch. In other words, push email, contacts and events on all devices.

Assuming it works as it's supposed to, and given the experience with .Mac, that's a big assumption, it should be the easiest way yet devised to keep multiple devices in sync with each other without having to remember to actually sync them. One of the key points here is that it doesn't just work with Apple devices, nor only with a web browser on a Windows PC. It will, says Apple, work with Exchange too, so that email sent and received, and contacts and events managed through Exchange on a PC will be updated automatically online, as well as on your iPhone or iPod touch. Again with the caveat about it working as it's supposed to, that will be a huge deal, not just in terms of selling iPhones to large companies but helping encourage Windows users to make their next computer a Mac.

The online applications in MobileMe look good too, while Address Book and iCal are a big step forward. The new Gallery application is a leap ahead of what Apple offered before. Now, instead of having to upload an image from iPhoto or Aperture, you can upload them directly to a Gallery you've created from the web interface. You can still upload from Aperture and iPhoto, and when photos are added to an online Gallery, they sync back to iPhoto.

A re-vamped iDisk presents a Finder-style view of your files and folders from the web interface, making it much easier to manage and delete files from a machine that it isn't directly connected to your iDisk. And there's a great feature for sending large mail attachments that allows you, from the iDisk web interface, to send an email with a note telling the recipient there's a file waiting for them which they can download by clicking a link in the email.

At long last Apple looks to have a suite of web services worthy of its hardware and OS. However, it feels far from complete. In a world where Google and others have online word processors and spreadsheet applications, and Adobe has an online version of Photoshop, it can't be long before Apple expands MobileMe to include online versions of Pages, Keynote, Numbers and even iMovie. That would, of course, risk cannibalising sales of iWork and iLife, but that's a risk Apple is going to have to take. The market for consumer software applications is changing. Generating revenue by selling boxed DVDs and even downloads is a model that is being rapidly overtaken. Up there in the cloud, Apple may just, possibly by increasing the price of MobileMe when it adds new applications, have found a way to keep making money from its consumer software and at the same time continue its assault on the Windows PC and mobile phone markets. 

End of the line for .Mac

With Apple's announcement that .Mac is to be put out to grass, few will miss a service that never truly fulfilled its promise.



Words Kenny Hemphill
Image Danny Bird

Kenny Hemphill is MacUser's deputy editor. He spends most of his time chasing the latest gadgets in order to review them before anyone else can.

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Safari security hole in Windows

Microsoft has warned Windows users to 'restrict the use of Safari as a web browser until an appropriate update is available from Microsoft and/or Apple' to fix a security hole.

Safari is particularly notable because the Windows giant has never before officially recommended not installing software from a well-known third party because of security concerns. It is especially noteworthy as there have been no reports of any Windows users actually suffering malware attacks as a result of the vulnerability. By contrast, real-world malware attacks have been the bane of Windows users for years, without Microsoft warning users not to install the vulnerable software, sometimes its own programs like Internet Explorer.

The story started two weeks earlier when security researcher Nitesh Dhanjani warned that a vulnerability in Safari – the lack of an option that mandates a user's permission to download a file – combined with a weakness in how Windows XP and Vista deal with executable files installed on the Desktop could pose a serious malware threat.

These combined weaknesses could, he warned, result in a 'Safari carpet bomb'; which he said would make it possible for a 'rogue website to litter the user's Windows Desktop' with malicious files, 'without the user's consent'. Mac users of Safari are also vulnerable to a similar, if less visually intrusive, attack with the malware files appearing in Mac OS X's downloads folder.

The problem for Windows users of Safari is that generally Windows browsers such as Internet Explorer and Firefox prompt users to decide if they want to download a file, while Safari does not. However, it is possible for a malicious application to load



▲ Microsoft has issued a warning to Windows users about the Safari browser, claiming it poses a serious security hole.

without a warning from Windows. On the Mac, the operating system, not the browser, issues the warning.

Dhanjani said that while Apple agreed that it might be a worthwhile 'enhancement request for the Safari team' to consider, the company maintained that it is 'not treating this as a security issue'.

Apple's security team told Dhanjani that 'the ability to have a preference to 'Ask me before downloading anything' [for Safari] is a good suggestion. However, it gave no pledge to incorporate it in future versions.

Others were not so sanguine. The anti-malware organisation Stopbadware.org said

that Apple should 'reconsider its stance and treat this as the security issue that it is'.

A couple of weeks later, Microsoft followed up with its warning about using Safari on Windows. 'Microsoft is investigating new public reports of a blended threat that allows remote code execution on all supported versions of Windows XP and Windows Vista when Apple's Safari for Windows has been installed. At present, Microsoft is unaware of any attacks attempting to exploit this blended threat. Upon completion of this investigation, Microsoft will take the appropriate measures to protect our customers,' said the company.

Adobe updates Acrobat Pro to version 9 for July's release of Creative Suite 3.3

Adobe has confirmed that Acrobat 9 Pro will be integrated into Creative Suite 3.3, which will be released in July.

In addition to a new Flash and web-based feature, Acrobat's Overprint Preview enables you see how overlapping objects will print. Users can also convert colours from one colour space to another, switch RGB and CMYK blacks to solid black, and map one colour to another colour, including Pantone spot colours using built-in libraries.

A Compare Documents feature identifies differences including changes to text, text formatting, images, line weights and backgrounds between different documents.

Fireworks CS3 has been added to the Design Premium bundle, though not Design Standard. Fireworks is designed to be flexible tool to prototype web pages for interactive projects and includes a library of pre-built assets. It provides quick editing of vector artwork and bitmap images while

integrating with Adobe's other design applications – Flash, Photoshop, Illustrator and Dreamweaver.

Adobe Creative Suite 3.3 is available for preorder now. A new copy of Design Standard costs £895, while Design Premium is £1409. Upgrade prices are also available for owners of Creative Suite 3 and various individual applications. The Web Premium and Master Collection suites have also been updated to include Acrobat 9 Pro.



01

NEW PRODUCTS

Words Kenny Hemphill

The hottest on the horizon

01

Epson Stylus Photo R2880
Price £570 (£485 ex VAT)

Contact Epson + epson.co.uk
The Stylus Photo R2880 is Epson's latest A3+ inkjet printer, and is aimed at both professional photographers and enthusiasts with deep pockets. According to Epson, the R2880 uses a refined look-up table algorithm to more accurately match colours. There's also a driver mode which provides greater creative control over black and white tints and gradation. The R2880 has two USB 2 ports on the rear and a PictBridge USB port on the front. It prints to CD and DVD, roll paper and rigid media such as board and polyboard, in addition to traditional stock.

03

Sanyo Xacti HD1010
Price £TBC

Contact Sanyo + sanyo.co.uk
Sanyo's latest Xacti high definition camcorder captures video at 1920 x 1080 pixels at frame rates up to 300fps. When played back at 60fps, the video is slowed down by a factor of five producing footage that has the potential to seriously embarrass your subject. The Xacti HD1010 can also capture 4-megapixel stills at up to 7fps, has a 10x optical zoom, face detection for recognising up to 12 faces at a time and an image stabilisation mode. Footage and photos are stored on SD and SDHC cards, and an 8GB card can hold up to 87 minutes of HD video.

03

Sennheiser MM50 ip
Price £50 (£42.53 ex VAT)

Contact Sennheiser + sennheiser.co.uk
Sennheiser's range of in-ear earphones has become popular among iPod owners due to a combination of high quality audio and reasonable prices. Now the company is hoping to repeat the trick with this headset, which has been designed specifically for the iPhone – both the old model and the new 3G handset. The in-ear capsules are the same as those used in the company's CX300 earbuds and there's an integrated microphone with a call answer/end button. That button also controls the iPhone's music playback.

04

Macally IceCam2
Price €30 (about £23.70)

Contact Macally + macally-europe.com
Entering a market that Apple has pretty much sewn up is generally regarded as a no-no for companies intent on making a profit. Entering a market for a product that Apple gives away free for all but its most expensive Macs therefore, would appear foolish. Credit then to Macally for taking this brave step with its IceCam2, a USB 2 webcam aimed at iSight-less Mac users. The camera has a built-in microphone and supports video resolutions up to 640 x 480 pixels. It doesn't need any driver software and works with iChat, Yahoo Messenger, and MSN.

05

lomega eGo 1TB Desktop Hard Drive
Price £150 (£128 ex VAT)

Contact lomega + lomega-europe.com
Developing a range of portable hard drives and calling them eGo is reasonable enough, but capitalising on their success by renaming them eGo portable and adding a desktop range is more questionable. However, that's what lomega has done and here we have the result: the eGo desktop 1TB drive. The one in the picture is in midnight blue, but the case is also available in ruby red and jet black. It has a 3.5in 5400rpm hard disk, will work with a Mac running Mac OS X 10.1 or later and connects via a USB 2 port.

02



03



04



05



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STEPHEN FRY AND THE IPLAYER

From Pascal Harris pascal.harris@gmail.com

Stephen Fry criticises iPlayer for being insecure and accuses the BBC of naivety for throwing out valuable content for free.

On the first point, Stephen (because I feel sure that you must be an avid reader of *MacUser* now that the editor has removed the blender from your brain), you are absolutely right. iPlayer is insecure, just as broadcasts are insecure. Any puppet can download from iPlayer, just as any puppet can set a VCR to record a programme.

On the second point, I'm not sure that you are right at all. I'm not criticising the quality of BBC programming, even in these 'dumbed down' days some of it is quite interesting, but I am criticising the quality of iPlayer itself. Have you watched it? It's appalling. It makes VHS look like the last word in high definition entertainment.

The truth of the matter is that if you like a programme enough to want to keep it, you will buy the DVD in order to get the best quality. If you're content with the quality of iPlayer, I'd argue that you probably weren't going to buy the DVD anyway. So, as far as I can see, the BBC has lost no revenue and, with iPlayer, gained a new distribution service that might even help sell DVDs.

UPGRADE ISSUES

From Charles Whalley charles@cwa-ltd.co.uk

Some of us in the industry have to use Office, because our clients demand it in the form of asking us to design templates in PowerPoint and Word. To this end we would expect an improvement on launch speed – not a stratospheric increase.

With the Mac OS X 10.5.3 update, anyone working over a network is having horrendous problems with Photoshop. So who is to blame? Adobe and Apple seem to be at loggerheads over development and it's

STAR LETTER SCI-FI CLASSICS

From David Seymour david.a.seymour@googlemail.com

I was interested in Jennifer McRobbie's column where she wonders whether Jane Austin had ever written any science fiction (see *MacUser*, 6 June 2008, p106). Well I don't know about Miss Austin, but Anthony Trollope, 1815 to 1882, certainly did. *The Fixed Period* (published in 1882) is set on a wealthy British colony on a large sheep rearing island somewhere near Australia in 1950 or 1960.

The fixed period of the title refers to a system of legally enforced euthanasia when one reaches the age of 60 or 65 (I can't remember which). This is to alleviate an overcrowding problem. It's democratically voted in, but when the time comes for implementation problems arise. The only gadget I can remember is a steam tricycle that the Prime Minister uses to get around the island. There are other gadgets, but I can't remember what they were.

Nik Rawlinson replies: After a little bit of hunting around, it turns out that this is a bit of a Trollope curiosity (his only sci-fi for starters). It was set in the 1980s, and the age at which the inhabitants of the island were euthanised, just off New Zealand, was 67 – the age of Trollope himself when he wrote it.

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the customer who is the meat in the sandwich. As far as Apple and Microsoft are concerned who knows. One thing is for sure though – it must be one of them.

Nik Rawlinson replies: Working directly from a server – although we all do it from time to time – is rarely a recommended course of action. John Nack, Adobe's product manager for Photoshop, explained why in a blog posting when he cited timing issues, network noise, performance and other issues as potential spanners in the

works. For this reason, the company recommends 'working with files locally and then copying them up to a file server when you're done'.

That's how we've worked at *MacUser* for years, and we can attest to the performance improvements it delivers. However, for those who still prefer to work directly from their server, it would appear that Adobe and Apple are working closely to try and fix the problem, which should be ironed out in the next system update.

UNDERSTANDING THE MESSAGE

From Martin Pittaway martinpittaway@mac.com

Thank you for printing my letter (see *MacUser*, 6 June, p20) about large software developers profiteering at the expense of the user. Your interpretation of my point is clearly incorrect.

My message was to the large software authors about profiteering, not a recommendation to users to pirate software. To compound this you have, as usual, responded in such manner that you are acting as judge and jury, commenting on the content. You initially act as judge and jury determining whether the content of the received communication is worthy of printing. But to then pass comment... This action of yours in writing a response personally I often find quite offensive. I am sufficiently well educated to determine for myself the meaning of the writer without additional influence.

Perhaps you should consider allowing your readers to make up their own mind rather than using the letters page as a means of voicing your own opinion.

POWER TESTING IN REVIEWS

From William Clark
will@clarkonline.org

Being an engineer I have been interested in the efficiency of machines for many years, and recently I have taken an interest in the power draw of electrical devices, particularly those which do no 'work' in the physical sense. My interest was down to the dislike of waste, years before the recent green concerns. So I was very pleased to read Nik Rawlinson's editorial (see *MacUser*, 6 June, p3) in which he explains that he has switched to a green tariff and is monitoring his usage.

I have a suggestion. Your reviews should include three power measurements for any device you test:

Full power draw You would need to standardise a test for Macs, which makes them run under full load. Maybe encode a standard 20-minute movie to Mpeg-4.

Idle power draw How much the device draws while switched on, awake, but otherwise doing nothing.

Sleep/standby power draw How much it draws while 'asleep'.

Obviously, some devices will not have a sleep mode or idle, in which case you could

just say 'Idle: no option' or similar. You can buy a simple plug in device for about £20 in a high street electrical store. You may also need to read up on power factor, VA and watts so that measurements can be qualified when necessary – in theory, you can draw 100VA but be using 0 watts.

I tested many of the items around my house and was surprised at the results. My 25-year-old TV only draws 1W in standby (I switch it off when not in use), while my stereo/hi-fi draws 20W in standby – this is now always depowered. My old iMac (line DV) drew 9W in sleep, but my eMac draws only 1W. Both Macs draw about 70W to 90W in typical use.

I know you like to trumpet the magazine's green credentials. With energy consumption so high on today's eco-agenda, you could pioneer people's understanding of power figures and also put them into perspective.

Kenny Hemphill replies: You're absolutely right that the energy consumed by today's Macs and peripherals when in use and when idle is an important issue. It's also becoming a significant factor for Mac users when we decide which computer, printer, or hard drive to buy. We are in the process of planning just how to implement a testing regime along the lines of the one you suggest. Before we do, of course, we need to ensure that it provides results which are both useful to the reader and fair to the manufacturer. Watch this space.

A TOILET IS A TOILET

From David A Hardy dave@astroart.org

In your news piece on keyboard hygiene (see *MacUser*, 23 May, p10), you write: 'The second cause (of keyboards being infected with bacteria) was people not washing their hands after visiting the bathroom'. A disgusting habit anyway, but we are British, dammit. We don't need these namby-pamby US euphemisms. We call a toilet a toilet.

COMPETITION WINNERS

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The winner of a 16GB iPod touch and Toast 9 is:
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Printed in England by BGP Print Ltd, Chaucer International Estate, Launton Road, Bicester, Oxon OX6 7DZ

Distribution Seymour Distribution 020 7396 8000

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Member of the Audit Bureau of Circulation
Jan-Dec 2006 16,001

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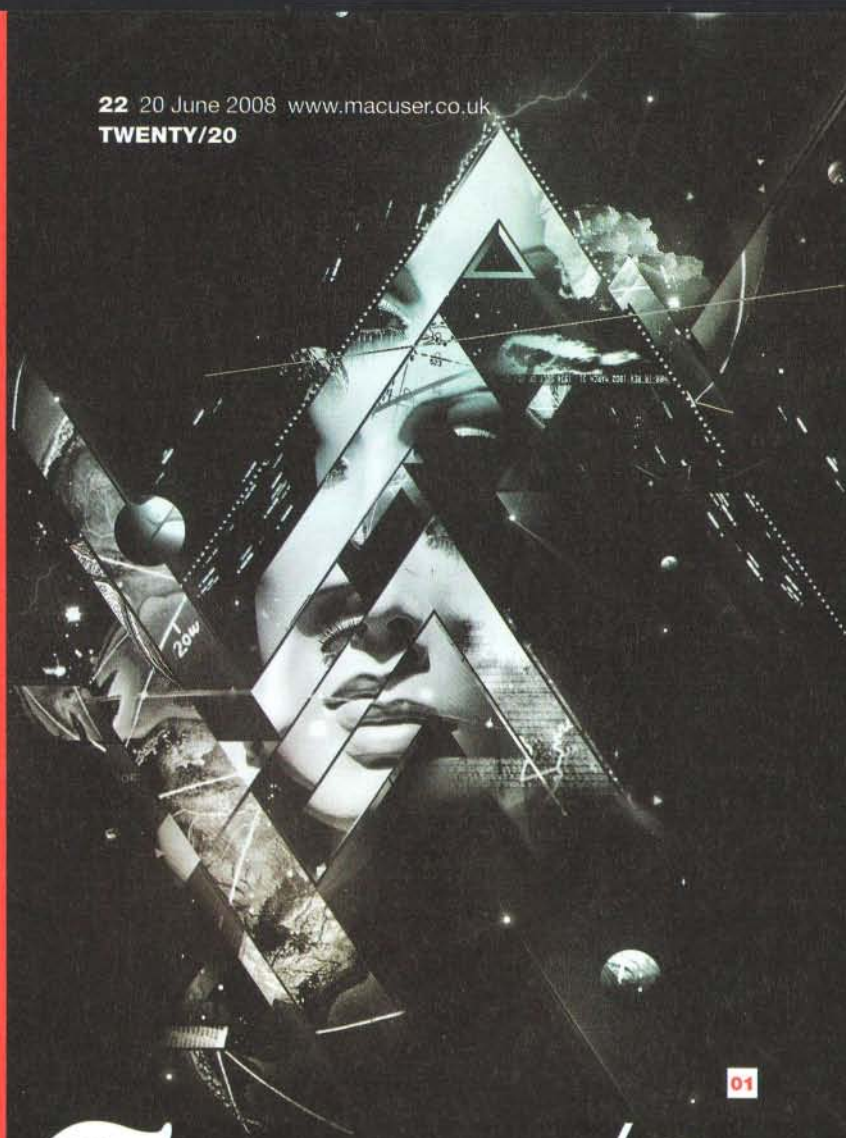
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This issue is dedicated to Baby Brennan.



The paper used within this magazine is produced from sustainable fibre, manufactured by mills with a valid chain of custody.

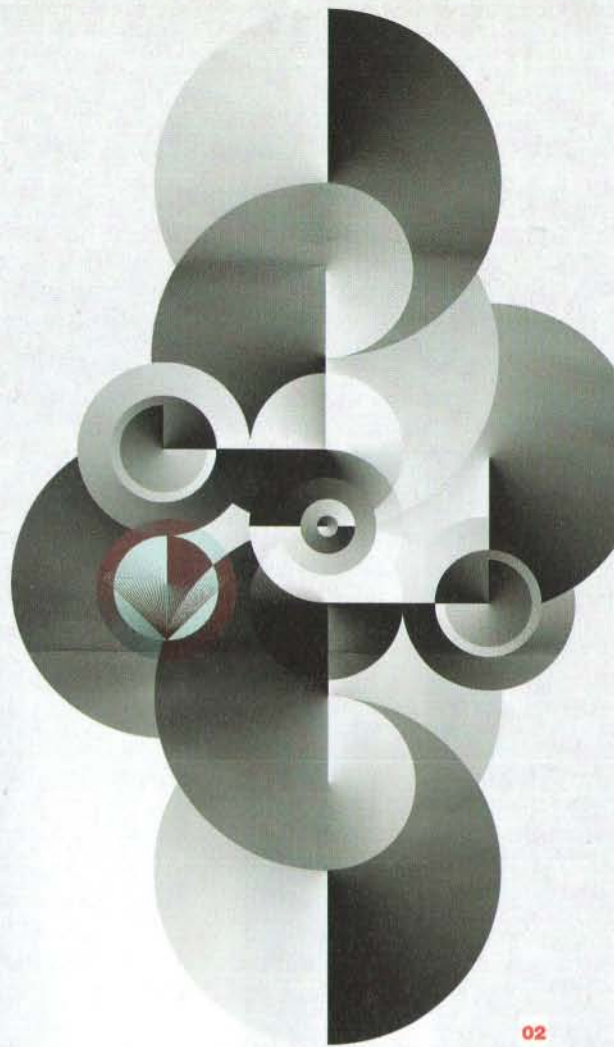


01

Twenty/20

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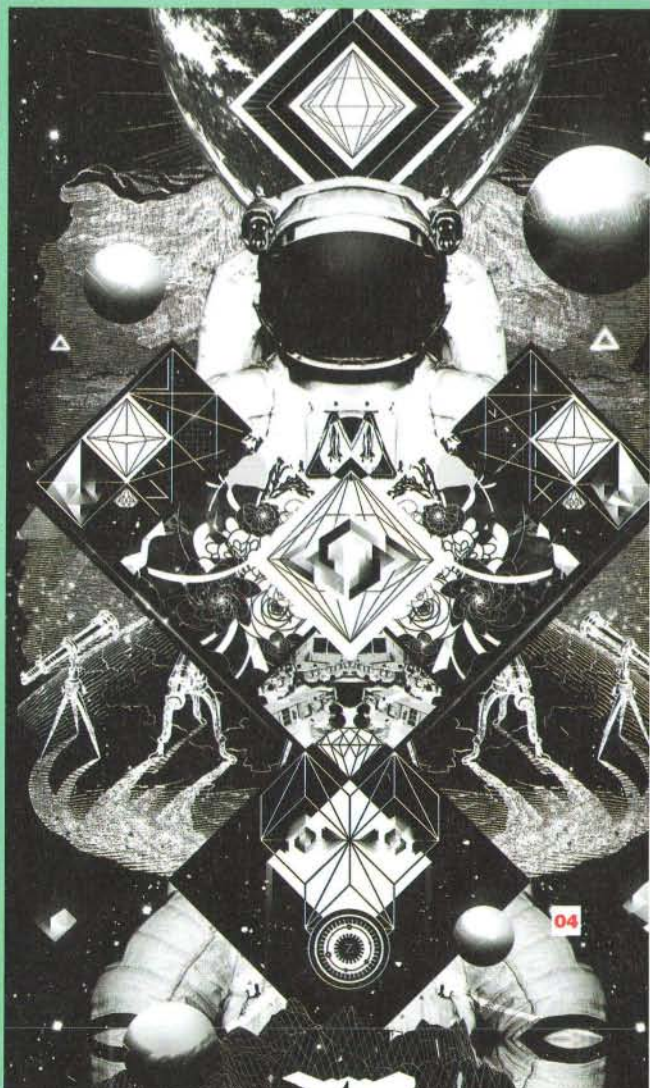


02

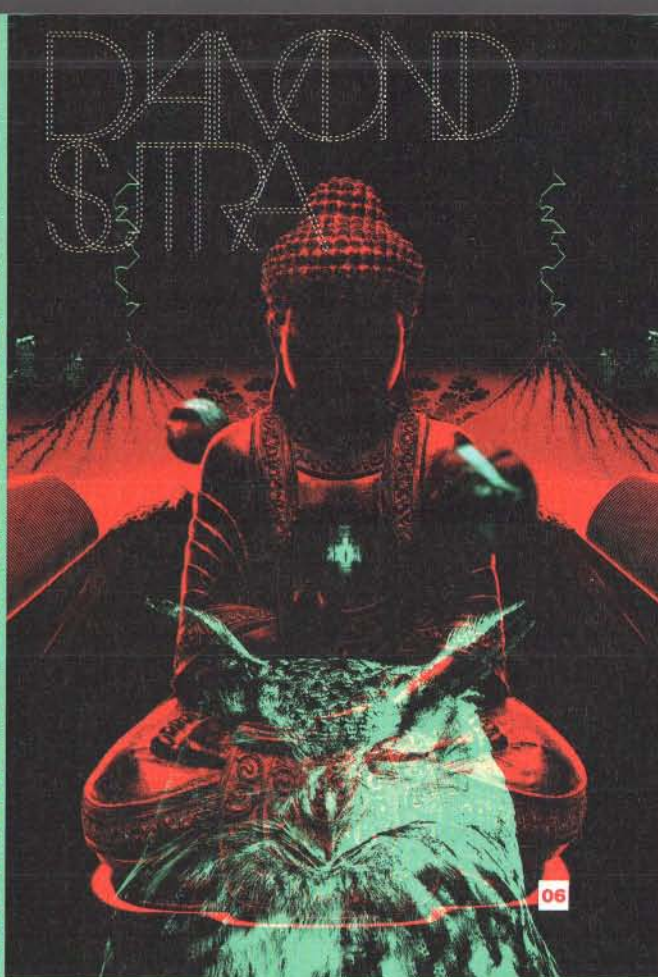
THE
ODD
BLACK
MAGIC



03



04



Porto-based freelance graphic designer and illustrator **João Oliveira** started out in 2006 and is currently taking a degree in Communication Design at ESAD (Escola Superior de Artes e Design) at Matosinhos. His work has been featured in a number of sites and magazines and in 2007, he won MTV's Take Action, Make Art contest.

What was your first Mac?
A MacBook.

What equipment do you use apart from your Mac?
A Wacom pen tablet and a scanner.

What are your tips for success?
Mainly motivation and a passion for what you do. You really have to believe that you can do it and trust yourself. By having these, the rest will naturally come.

Talk us through these examples.
01 Intergalactic

This particular piece was born from an experiment with photos inside geometric shapes. Since I really liked the result I kept expanding it and adding details. It was completely made with Photoshop from public photos of space agencies like Nasa, while the light effects were made by applying blurring filters to lines and shapes.

02 Naturally Zen

This was another experiment, this time using gradients. I found it interesting how the different gradients combine with each other to give amazing depth, shadows and light effects. It was made for a digital exhibition called Zen, so I tried to express that feeling through the balanced, dynamic and almost desaturated aspect of this piece.

03 That Old Black Magic

The concept for this is related to Jazz, especially classic Jazz from Louis Armstrong and Ella Fitzgerald. It's hard to see, but the mess of wires is a statue of a guy playing an instrument. Just like Target: Zenotron, it's created from photos and illustrations made in Photoshop and Illustrator. I played with different blending options and shapes to obtain various effects.

04 Target: Zenotron

This piece was created using a wide range of techniques ranging from 3D to collages. I used Photoshop, Illustrator and Cinema 4D. Most of its elements are photos and illustrations, both traditional and digital ones, while all of the light effects and general composition were made in Photoshop. It has some 3D elements like the wire style mountains at the bottom.

05 To the Infinite

It's all about doodling in this one, so I can't say much more about it. It was done completely with Illustrator, from the linework to the colouring.

06 Diamond Sutra

Made for the same digital exhibition as my Naturally Zen piece, in order to convert the photos to just one colour I had to convert them to duotone mode a number of times. I used Japanese illustrations, too.

What or who are your influences?

I love retro, vintage and Japanese art and design, but I also spend a lot of time looking at posters along with all kinds of art and design pieces, which makes my style very eclectic.

What mistakes have you made that you have learned from?

Probably trying to follow the trends when I was just starting out. After a while I realised that I had to create something different from everyone else, which is what I've been trying to do ever since.

How did you get your big break?

I would say that the moment I won the HP MTV Take Action, Make Art contest my career changed in a big way. It spread my name all around the world, and ever since winning the competition I've been getting more and more jobs and contacts, so it definitely was my biggest career-defining moment until now!

What's your ideal project or commission?

A project that gives me a large amount of creative freedom to make what I want from an open briefing.

Is there any kind of creative work you would refuse?

Yes, I wouldn't accept any creative work related to racist, xenophobic or

any other entities that go against my basic principles.

What's your greatest creative inspiration?

Probably music. Usually most of my ideas are heavily influenced by the music that I listen to.

What excites you professionally?

I would say a challenging project that offers creative freedom.

What's wrong with design today?

I wouldn't classify this as totally wrong because of the huge amount of designers, but I think everyone should try to be original and develop their own style. The design world is constantly changing and following trends, but there's always space to innovation.

Tell us about something good?

Well, I hope to finish my degree as a communication designer, and continue working as a designer and illustrator. I'm really optimistic about the future of my professional career, and it's great to work in something that you love and enjoy.

What frustrates you?

Not being able to express my concept in the image really frustrates me, but the good side is that it's the best way for me to develop my techniques. It's frustrating, but it's also rewarding.

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STORAGE DEVICE**
**BUFFALO LINKSTATION
MINI 1TB**

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A perfect product with great features at a great price.



A product with minor flaws but which is nonetheless excellent.



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A product that's outclassed by others in its field.



A poor product that we can't recommend in its current state.

AWARDS SYSTEM

Editor's Choice

This award can be given at the editor's discretion to a product judged as outstanding and a must-buy in the issue.



Labs Winner

Given to the products that in the opinion of the reviewer are the best in their field at the time of testing.



The MacUser A-list

Only the very best products make it into our A-list. They are the products on which the editorial team would spend their own money.



MACUSER REVIEWS CHARTER

How...

MacUser firmly believes that a proper, detailed review can be carried out only by rigorously testing the product. We don't believe value is derived from describing a product's features without any analysis. We'll never give a positive review to a product that we believe isn't worth our readers buying, which means that a positive *MacUser* review is of enormous value to both the reader and the manufacturer of the product.



Products are tested in-house wherever possible, using a mix of industry-standard and bespoke testing software suites.

Top-rated products earn themselves a place in our expanded A-List section to provide you with an issue-by-issue update of the best products in any category for use on a Mac. This, along with our definitive awards system (left), lets you see at a glance which products are worth the manufacturers' asking price.

Product selection

We give priority to mainstream products but we also make every effort to cover a broad range of items, and regularly feature 'niche' products.

Complaints

We do everything we can to publish fair and accurate reviews. If errors do occur we correct them in 'Search and Replace' in the Mailbox section.

CATALOGUING TOOL

Delicious Library 2



Price \$40 (about £20.50); upgrade \$20 (about £10.23)

Contact Delicious Monster + delicious-monster.com

Needs Mac OS X 10.5 (10.5.3 recommended)

Pros Online lookup + Scan barcodes with iSight + Manage loaned items

Cons Some instability + Documentation is for first version + Search by product code no longer available

Though it's simple for Mac users to catalogue and organise digital music and photos, it's tempting to resort to quick and dirty methods when keeping an inventory of physical items – text files and spreadsheets are common but lazy methods. Delicious Library is a pre-built database for managing collections, with entertaining presentation and slick features for adding items to the library.

It now records details of toys, gadgets, tools, apparel and software, as well as music, movies, books and video games. Among the various fields, the one for location is handy to record box references when moving home.

The window layout is reminiscent of iLife, with collections for each item in the left pane, and their contents shown on the right – either in tabular layout or on snazzy faux wooden shelves that show off cover art in their full glory. Item details previously appeared in a third column, but it now appears beneath the shelves, much like Mail's preview pane. Reviews are downloaded from Amazon along with a description and recommendations, and the pane can be resized or hidden. It's a pity it can't be restored to the old layout, though.

Adding items is as easy as scanning their barcode with an iSight camera, which

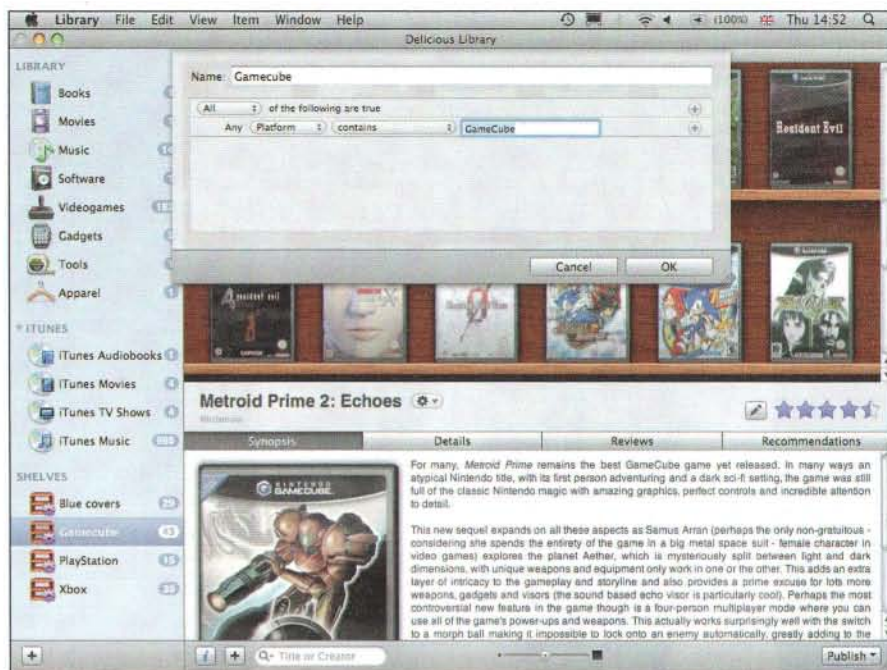
- Amazon then looks up on its website. A text-based search can be used as well, with results presented inside Library along with links back to Amazon for the full details – handy for distinguishing similar editions. Details can be edited or you can start from scratch, but online lookup remains this application's major strength, encouraging you to keep adding more content, which can be almost addictive rather than a chore.

There are new animations when items are added and deleted. Optical discs shatter when deleted, while books somewhat disturbingly burn away. It's a neat touch if a little superfluous.

To keep an eye on specific items, shelves can be added to the left pane. Drag an item onto it and you can keep track of the current selling price of unwanted possessions. This has been extended with smart shelves, which automatically retrieve items based on criteria. It's a trend that we've seen in a wide variety of different applications, from iLife to EyeTV, but the implementation needs a little work before it can be relied upon.

It works well for some fields, such as genre or video game platform, but looking for a minimum value returned no results, though there should have been many. Prices are only retrieved from Amazon, and we'd like to see integration with other sites – particularly eBay – to use as guide prices.

Library already tracks music and movies, but it now has a separate iTunes group in the left pane to show audiobooks, movies, TV shows and music. Track names, cover art and other details are also retrieved. It



▲ Smart shelves are built with the same, familiar controls as Smart Folders in the Finder and Smart Playlists in iTunes, and they're an ideal way to inspect large collections.

works as an alternative graphical interface to Cover Flow – especially for large libraries where that view is too restrictive. Hovering over a cover shows a play button that fires up iTunes. Integration is one way; cover art can't be added in Library, nor can you attach new information such as an Amazon reference, so you'll still need to scan CDs to keep track of their worth and who has borrowed them.

Like the real-world equivalent, items can be loaned from the Library. Add a friend from Address Book and drag items to their name in the left pane. This is where the

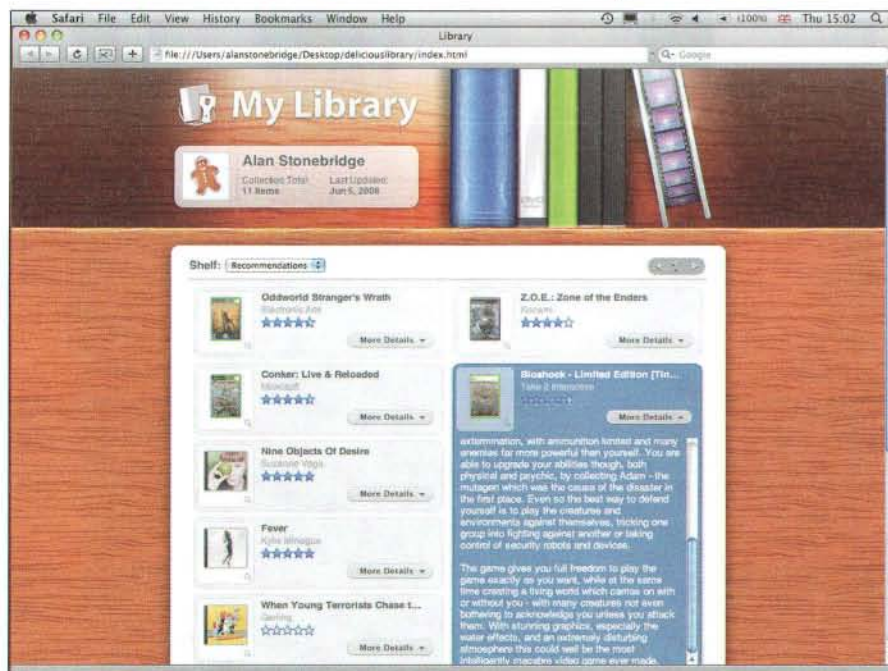
counters next to each collection comes in handy; they aren't just for bragging rights, but serve as an instant reminder that someone hasn't returned an item.

This is complemented by the new online publishing feature, which also includes an iPhone stylesheet. Friends can look up items they want to borrow, though very long item descriptions were truncated on an iPhone. More importantly, there's no option to exclude them and speed up the export process, and we hope this will be refined in future.

Updating to Mac OS X 10.5.3 gives a massive performance boost when scrolling through the iTunes library. Before we installed it, scrolling would freeze the Library for a while, but this problem disappeared after the update. The transfer of covers from iTunes remains slow though, even on a fast iMac with the maximum amount of Ram. Despite the update, we still encountered the occasional crash – one while the application was left to grab art from iTunes.

It's inevitable that you'll need to learn how Library works, but the overwhelming sense of familiarity with its presentation and tools such as smart shelves helps to reduce the learning curve to near a plateau. An iSight camera helps to build the library quickly, too. The new features lean in the right direction, but we are dismayed by the remaining stability issues and quirks, otherwise we'd have rated Delicious Library 2 highly due to the barcode scanner and online lookup.

Alan Stonebridge



▲ Shelves can be published online with Delicious Library 2, though the mobile version of Safari doesn't display scrollbars and long descriptions will appear truncated and inaccessible.



rE-versible Sleeve



Must-have fashion for Apple MacBook & MacAir

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VIDEO ENCODER

Pinnacle Video Transfer



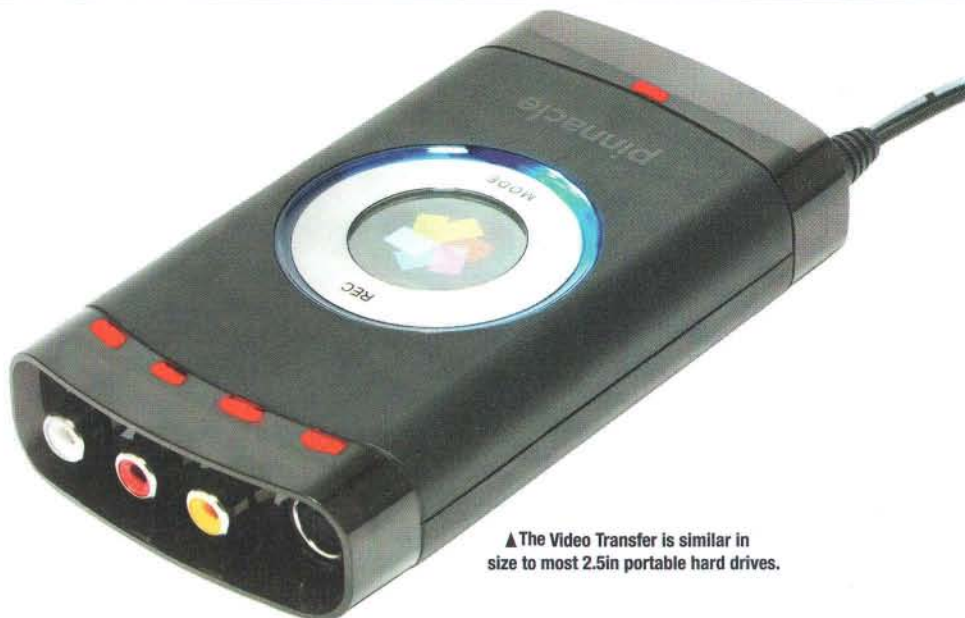
Price £99.99 (£85 ex VAT)

Contact Pinnacle Systems + pinnaclesys.com

Needs Video source with Scart, S-Video or composite connectors + Left and right audio outputs

Pros Clear status lights + Easy to use

Cons No deinterlacing + Can't use from Mac Desktop
 + Unable to stretch out anamorphic video



▲ The Video Transfer is similar in size to most 2.5in portable hard drives.

Inside Video Transfer's small box is a hardware-based video encoder that produces H.264 movies for use with iPods and other devices. It's a standalone device that converts analogue video, whether it's old video camera footage or output from a set-top box.

At the back of the box are S-Video and composite video inputs, along with left and right audio jacks. A combined cable for

composite video and audio is provided, along with a Scart adapter – a real bonus if you use it to record from a set-top box where it's often the only output.

At the front of the unit is a type A USB port for connecting a recording device, and a presently unused type B port. Power is taken from the mains supply, some of which is passed to the type A port, keeping an iPod or other bus-powered device charged during recording. We were pleased that a 2.5in portable hard disk also received enough power to keep it running.

Big, bright lights next to each connector show their status. If no video signal is received or an incompatible output device is used, the corresponding light blinks red. When all is okay, lights remain solid blue and they turn solid red during recording.

◀ There are S-Video and composite video inputs on the back of the device.

This was intuitive enough to alert us to a problem with an external hard disk. Though the manual is specific about using a Fat file system, Video Transfer took issue with the disk's partition map, which had to be reset to Master Boot Record using Disk Utility. It's a very specific problem though, and one that will only affect Mac users repurposing old hard drives. There should be no such problems with USB-powered iPods, PSPs and card readers.

On top of the box is a circular control with two buttons – one labelled mode, the other to begin and end recording. The former cycles through three quality settings, with three lights shown for the highest one. Each uses a different data rate and pumps out different resolutions. Our VHS source retained its original resolution at the highest setting, dropping to 640 x 480 pixels and 320 x 240 pixels on the medium and low quality modes.



MAIL UTILITY

Mail.appetizer 1.3



Price Free

Contact Bronson Beta + bronsonbeta.com

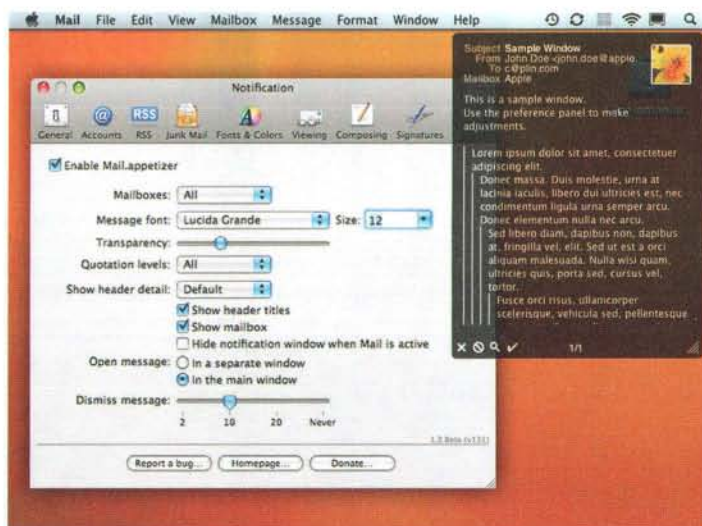
Needs Mac OS X 10.5 (versions available for earlier systems)

Pros Instant at-a-glance view of incoming mail + Translucent, auto-dismiss window

Cons None

Mail.appetizer is an add-on to Apple's Mail application that has just one purpose – to pop open a preview of any incoming mail in a preview window, which floats above everything else. It's also one of the most useful utilities we know of.

Rather than just hearing a sound to indicate that you have a new message, or seeing an icon bounce in the dock, this



◀ Mail.appetizer's preference pane shows exactly how the notification window will look when you have incoming mail.

application shows you the first dozen or so lines of any incoming emails. Four buttons appear at the bottom of the window, allowing you to dismiss the window entirely, delete the message, mark

it as read, or switch to it in Mail. There's also a counter that shows how many messages you have waiting to be examined – clicking anywhere within the window will go to the next message.

Given that we used the aged analogue format to test the device, the quality was already less than we're accustomed to and its lack of fidelity also posed a challenge for the encoder. We were pleased enough with the results for archiving home movies in a digital format, though our source tape was fairly clean. The hardware's status lights will indicate if there's a problem recording an unstable signal and it will continue recording when it becomes more stable again. The hardware doesn't deinterlace video, instead it relies on the intended playback hardware or software to do this.

Video Transfer is handy for archiving old family videos, especially if you lack the expertise or time to use an analogue-to-digital converter to capture and edit DV. That's a better solution if you want to edit and output to DVD, but Pinnacle's system is very easy to use. There's a potential problem with analogue cameras that record anamorphic video as there's no documented way to stretch the video back out to the correct aspect ratio, but it's not an issue for older cameras that only record letterboxed video.

Once you've digitised old VHS and Hi-8 tapes, however, Video Transfer may become eBay fodder. Pinnacle's suggestion of using it with a set-top box is unconvincing given how cheap and flexible Mac-based TV tuners are, and software such as EyeTV and The Tube will export iPod-friendly video. A more logical extension would come from QuickTime-compatible software to leverage the hardware from the desktop.

Alan Stonebridge

What makes Mail.appetizer work so well is its customisability. You can set the opacity of the window at a level that makes it readable, but not intrusive. The window can also be set to auto-dismiss after two or more seconds, so you can just glance at it and then ignore the incoming mail if it's not urgent, allowing you to continue your work without interruption.

You can choose how much information is displayed in headers, how many quotation levels are listed, the preview font and size, and which mailboxes are shown in the preview window. All this is controlled by a preference pane within Mail itself.

Mail.appetizer has been around for a while, but this is the first version of it to run under Leopard (Mac OS X 10.5). It's a utility that many have missed since upgrading from Tiger, and it's a real treat to have it again. Best of all, it's absolutely free. Try it and you won't be able to live without it.

Steve Caplin

NETWORK ATTACHED STORAGE DEVICE

Acer EasyStore 1TB



Price £300 (£256 ex VAT) from kikatek.com

Contact Acer + acer.co.uk

Needs Ethernet network + Knowledge of addressing, backup software

Pros Four fast Sata drives for Raid 0, 1 and 5 + Works on mixed networks

Cons Installation isn't that easy + Small indicator lights

Network Attached Storage (Nas) is a good description of what the EasyStore does. By connecting one or more hard drives to your network, with the firmware to handle it, you can have a common point for backup and media serving. The EasyStore can handle automated backups and serve photos, music or video.

While you can achieve the same using local storage, the advantage of Nas is that you have multiple drives physically separate from the Macs they serve. With two or more drives – the 1TB EasyStore has four 250GB Sata drives – you can arrange them in a Raid configuration, providing two levels of back-up in one unit. With a Raid 1 configuration one drive mirrors everything on the other.

This way, if a hard drive in the Nas fails, and eventually all hard drives will fail, all

✗ your data is still safe on the other. By simply sliding out the dead drive and sliding in a new one, you can restore the whole Nas. The EasyStore automatically copies the data from the surviving drive to the added one and you're double protected again. Using this configuration halves the total available space to 500GB, of course. The EasyStore also supports Raid 5, which provides the same redundancy as Raid 1 but, because of the way it distributes data, makes 750GB available for use. If you don't need the extra protection, you can use Raid 0 and stripe all four disks for extra speed, instead.

Physically, the EasyStore is around the size of two Mac minis turned on their sides, so it doesn't take up much room. At the front are four drive

✗ ► Acer's neat little box of four 250GB hard drives will keep business data secure.

bays, each with a quick release latch, so you can exchange drives should the need arise. There are rather small indicators for drive and network activity, and not much else. At the back are power and network sockets and two for USB drives.

Access to the EasyStore setup is simple via a web browser and you can setup individual user accounts to provide security when several people are sharing the storage space. You can define shared storage areas too, for pooling files across a business or workgroup.

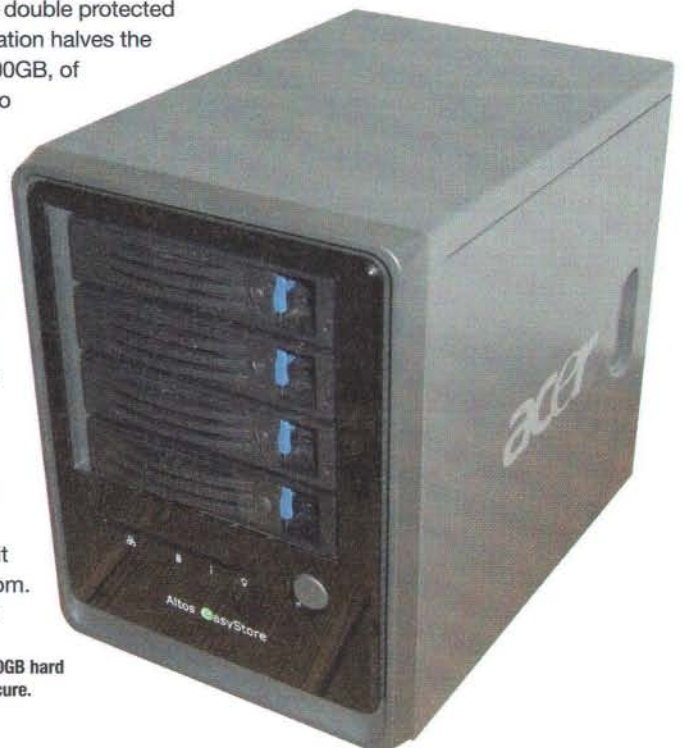
To set up the EasyStore initially, you're advised to connect direct from a computer to the Nas, via an Ethernet cable. You have to put your Mac into the same IP address range and subnet as the default settings on the easyStore to achieve this.

The EasyStore could really do with an installation guide written in good English and not aimed for the network manager of an IT department. This product is intended primarily for small businesses, most of whom won't have dedicated support staff, so the kind of networking language used isn't always helpful.

Also unhelpful is the lack of any Mac-based backup software. PC customers get free software to automate scheduled backups, but there's nothing included for the Mac. There are plenty of third-party back-up applications available, so it's a shame Acer couldn't bundle one or make it available for download.

Once installed, the easyStore is a no-fuss solution for fast, secure backup of all kinds of Mac data, but a bit more help with the setup wouldn't go amiss.

✗ **Simon Williams**



MID-RANGE DSLR CAMERA
Canon EOS 450D



Price £499 (£425 ex VAT) with 18-55mm IS lens kit
from amazon.co.uk

Contact Canon 08705 143723 + canon.co.uk

Pros Small lightweight body + Good resolution
+ Handy live view and anti dust systems + Low noise

Cons Small handgrip and general handling niggles
+ Some focus inaccuracies + DPP Raw editor not supported
by Mac OS X 10.5

Outdoing its semi-pro 10-megapixel

Eos 40D as well as the Eos 400D, Canon's new mid-range Eos 450D features a higher resolution 12.2-megapixel CMOS sensor with automated dust removal, 14-bit colour capture, and a new, larger 3in LCD with Live View. Also tempting, and tallying with our results with up to four stops compensation, is the newly developed EF-S 18-55mm image stabilised kit lens.

Viewed from the front and sides, the 450D resembles the entry-level 400D, though the improvement in viewfinder magnification, up from 0.8x to 0.87x, may be responsible for the larger looking head. Build quality is similar to the plastic-shelled 400D, it's good but not to the same standard of the magnesium-alloy case used for semi-pro 40D. The 450D shares the undersized handgrip of the entry level 400D, which even for small hands isn't comfortable, and it's troublesome when larger lenses are used.

Elsewhere, the layout of the controls is intuitive. A liberal spread of buttons provides access to most day-to-day features using the enormous looking 3in screen. Annoyingly, you can't use the forward control dial to make selections. Instead, choices have to be made from the four-way pad to the right of the screen. Like the 400D, a handy proximity sensor makes sure the screen is on and acting as a data panel when held away from the eye, but it's not as slick as it could have been.

What's more, the 450D lacks the rear command dial used by the maker's semi-pro and pro-level cameras. This makes selecting shutter speeds and aperture values trickier in manual exposure, as you have to hold down the EV compensation button to shift between the two. And, without the rear dial, you can't nudge EV compensation on the fly like you can with pricier models.

Like most DSLRs, the 450D adds Live View to the list of features. And like other



▲ Canon's mid-range APS-C format DSLR offers a 12-megapixel CMOS sensor, 14-bit colour capture and Live View.



◀ Features displayed on the huge screen are selected using the four-way pad.

makers' offerings, we feel the average buyer isn't likely to benefit greatly, at least on a day-to-day basis. While the Canon has both contrast detection AF using data from the main CMOS imaging sensor as well as the viewfinder-based phase-detection AF, it's no replacement for the quick focusing and ease of use of a compact.

There are benefits for more specialised uses though, such as high-magnification close-up and still-life work using a tripod. In the contrast-detection mode, you can focus precisely using the 10x magnification option, either using auto or manual focus from any point on the screen. It's slower in use than the Quick AF Live View mode, which requires the mirror to flip and use the usual AF system, but there's no blacking-out of the LCD screen and shutter-lag is minimal.

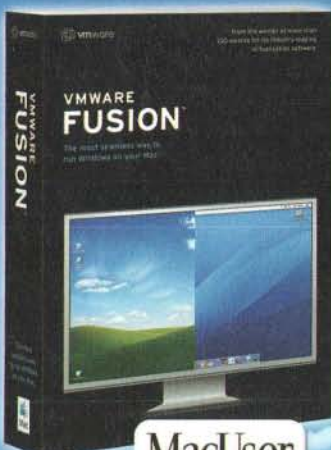
Looking through the viewfinder, a new 9-point AF system with an improved central cross-type sensor is better than most rival offerings at this level, though we still encountered some inaccuracies with the new kit lens. Nevertheless, the addition of a new 4% spot meter option is welcome,

as is the display of the ISO in the viewfinder. Like its rivals such as Sony's DRO function, the 450D has a new Auto Lighting Optimiser as well as a Highlight Tone priority option to reduce blown highlights and reveal shadow detail. In contrast to the Sony both these features work very subtly. However, we noticed the metering system has a tendency to overexpose slightly with overly bright scenes, making highlight recovery more difficult. While we found some speckles in the shadows at just ISO100, picture quality is still very high, and noise levels are well-controlled at high ISOs. A maximum sensitivity of just ISO1600 seems a little low by today's standard, but it's entirely useable for all but the most quality conscious.

Like the makers' other offerings, the Eos 450D is very likeable in use and for the most part produces stunningly detailed images. The few niggles aren't deal-breakers, but the current pricing in the UK with Canon's cash-back offers on the 40D pitches the 450D and kit lens close to the body only price of the faster and better handling 40D. That would make a better a choice as a second body, but if you're in the market for the first time, we certainly wouldn't hesitate to recommend the 450D.

Kevin Carter

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PANORAMIC TRIPOD HEAD

Kaidan QuickPan Professional Spherical



Price \$800 (about £400)

Contact Kaidan + kaidan.com

Needs Any digital SLR or SLR-style camera + Tripod

Pros Adaptable and robust panoramic tripod head + Works with many different cameras and lenses

Cons Heavy and large + No guidance measurements for initial camera setup + Not cheap

Panoramic photography is a relatively niche part of the creative industry, but it's increasingly used to create compelling, attention-grabbing imagery. Kaidan is a name that is well known as a manufacturer of panoramic tripod heads, the equipment necessary to take photos that can be stitched together seamlessly, without awkward shifts or overlaps that don't match. Its QuickPan Professional Spherical is the company's flagship product, a panoramic head that can be used with wide-angle or fisheye lenses to create spherical interactive panoramic photos as well as ultra-high-resolution multi-row panoramas with longer telephoto lenses.

When you first use the QuickPan, you'll need to spend some time setting it up for your camera and lens. You will have to find the position for both the rotator base arm and the upper arm that rotates the lens around its 'nodal point', or optical centre. This is essential to avoid having parallax shift errors in overlapping parts of adjacent shots, but it can take a little work. Once these two points are found, wedge-stops can be locked down so you can place the camera back into place easily from then on. Both arms have measurements in millimetres and inches, so you can make a note of the precise final positions, although there's no table of camera body and lens combinations to help you get started.

The maximum weight this is designed to carry is 9kg, which is more than enough for most people – even a full-frame sensor digital SLR with a large telephoto lens will fall within this limit. You can attach any camera with a tripod mount to the head, but it would be overkill to use it with a pocket-sized compact digital camera.

A bubble level attached to the base helps when adjusting your tripod, and it comes with a 1/4in as well as 3/8in tripod mount. The rotator 'click stops' are rock solid, being made with a sprung lever and

► The QuickPan can support up to 9kg in weight, which is more than enough for most cameras.



CHAT UTILITY

BluePhoneElite 2



Price \$24.95 (about £15)

Contact Mira Software + mirasoftware.com/BPE2

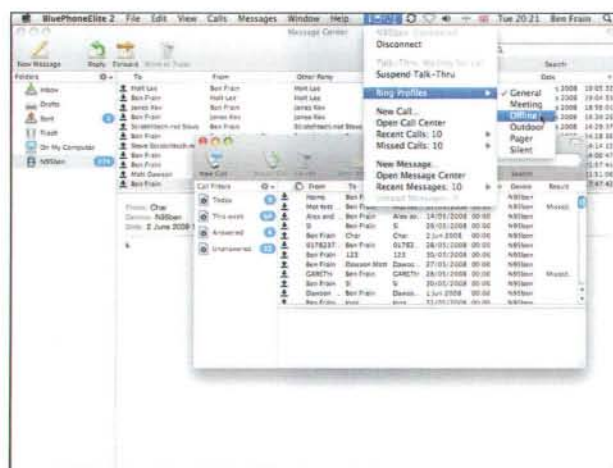
Needs Mac OS X + Compatible Bluetooth-enabled mobile handset

Pros Supports multiple devices + Desktop-based texting + Exceptional value

Cons Limited iPhone functionality + Variable call quality + Minor interface tweaks needed

BluePhoneElite 2 provides the ability to control selected Bluetooth-enabled phones within Mac OS X. By employing the Mac's integrated microphone and speakers, it turns it into a giant hands-free device.

During installation, Symbian and Windows Mobile-based phones require the installation of a small program, which is sent from BluePhoneElite 2 via Bluetooth. After installation, a handset is added and applicable services (which vary from handset to handset) are started. It's also possible to add support for dialling calls and sending texts direct from Apple Address Book.



► BluePhoneElite lets you control Bluetooth-enabled phones from within Mac OS X.

There is a considerable amount of customisation possible within the program. Each event (incoming call, message and so on) can have a different response associated. For example, an incoming message can trigger a large bezel window containing the text or a flash warning. User defined keyboard

In use, there are two main views, Call Center (for calls) and Message Center (for texts). All existing call and text records from the handset are automatically imported and viewable. Furthermore, the Call Center has some basic filters for calls received 'Today', 'This week', 'Unanswered' and so on. These are pre-defined and work akin to the Smart Mailboxes of Mail.

Besides the two main interface windows, BluePhoneElite 2 also adds a Menu bar icon for the handset in use. This shows signal and battery strength and clicking it lets you view the last 10 calls and texts.

shortcuts can also be added to launch the various sections of the application.

Making calls is simply a matter of either choosing a name in the call list of Message Center and clicking 'New Call'; or choosing a contact from Address Book, Ctrl-clicking a number and choosing 'Dial with...' from the contextual menu.

Extra capabilities include the ability to export phone call records to iCal, Word, RTF or text files, as well as printing call records direct from the application. You can also export or print text messages, either one at a time or as a group.

deep slots. The horizontal arm rotates and locks in a similar way, although a rubber ring replaces the spring. When your camera is mounted it is easy to disengage and turn to the next stop with a single hand. The model we tested came with a 12-stop 'indexing hub' rotator base, suitable for focal lengths up to around 30-40mm, but a number of others can be ordered instead.

The QuickPan is a precise, highly-engineered bit of kit. However, it is certainly not the cheapest panoramic head on the market, and it is undeniably large and, at 2.24kg, moderately heavy, so it can be awkward to carry to remote locations. It has been engineered for strength and function, and it satisfies those demands admirably – but we have to add that it isn't the most elegant or portable bit of kit you could buy.

This isn't aimed at the estate agent 'virtual tour' market; that's better served with a one-shot lens attachment such as Kaidan's 360One VR. This is for serious amateur or professional photographers, who want to do high-resolution panoramic work, whether for full-screen interactive display or for large-format print work. It's tough and precise and it does the job well, but the bulk is something to consider.

Keith Martin

Its performance is a mixed bag, though. For the majority of the handsets we tested, using BluePhoneElite to send and receive texts is far easier than reaching for the handset every time an SMS arrives. However, the voice side of the package needs a little tweaking. Our two main areas of concern were the echoes reported from people on the other end of a call and the inability to quickly cancel mis-dialled calls placed through Address Book.

Interface wise, we also feel that integrating the two sections of the program (calls and messaging) or making them 'dock-able' into one window, with tabs to switch between the two, would make for a more streamlined layout.

The biggest disappointment is saved for iPhone owners. While calls through OS X are supported, at present, texts, phonebook viewing, network and power status display, date and time sync, call logs and ringing profiles are not. Broadly speaking, Symbian S60, Sony Ericsson and Windows Mobile based handsets enjoy the best functionality.

These gripes aside, for suitable handsets, BluePhoneElite is successful. It provides an efficient solution for mobile-based correspondence when working from a Mac. ☒

Ben Frain

PANORAMIC TRIPOD HEAD **360Precision** **Adjuste**



Price £595 (£506 ex VAT)

Contact 360Precision + 360precision.com

Needs Any digital SLR or SLR-style camera + Tripod

Pros Light, compact and precise panoramic tripod head

+ Works with many different cameras and lenses

Cons Not cheap

If you're seriously considering

panoramic photography, whether you want to shoot 'partial' panoramas or create virtual reality productions, a specialist panorama head is the most important piece of equipment you can own. 360Precision is highly regarded in this field, and its new Adjuste head, the sibling to its flagship Absolute head, seems set to continue this tradition.

Unlike the Absolute, which is bought to fit a specific camera and lens combination, the Adjuste is adjustable. Like Kaidan's QuickPan Professional ☒ Spherical (reviewed opposite), the Adjuste can be set up to accommodate different camera bodies and lenses.

The base contains the horizontal arm and the rotator mechanism, a ball-bearing-sprung unit that can be turned from stop-point to stop-point with one hand. The camera arm's mounting plate has a location pin that matches a recess in the body of certain cameras, so that attaching your camera is fast and precise. This pin is the only thing that's relatively camera-specific, and different ones can be swapped in very easily. Rather than using a solid – and heavy – set of arms, the Adjuste uses parallel bars for each part. This provides the rigidity it needs, but without the weight penalty.

Once you start using the Adjuste one thing becomes clear very quickly – this is a product designed with extraordinary attention to detail, both in the precise engineering and in the usability design terms. The centre of the rotator base

has a built-in bubble level, and unscrewing this reveals a set of points for changing the rotator base's click-stop count (it comes with options for turning to four, six, eight and 36 steps around) and also the lock-down screws for fixing the horizontal arm's position.

Getting the Adjuste configured for your particular camera body and lens is something you'll need to do yourself, but figures for many digital SLRs and suitable lenses are available to get you set up virtually perfectly without hassles.

At 1.1kg, the Adjuste is relatively light, certainly compared with products of a similar quality. It's also easy to use – once set up for the first time, you simply connect the camera, level the tripod and shoot. The results are so precise that they can be stitched together using pre-made templates rather than painstakingly matching shots individually.

All this is very good to know, as you certainly pay for what you get. At £595 this is roughly £180 more than the QuickPan Professional – so does the product justify the cost? After using it for a couple of months we have to admit that it does. It made an immediate difference to our shots, and it was small and light enough to pack in a camera bag for remote fieldwork.

You'll need to be a serious amateur at least to justify the cost. But there's no denying that if you want the best, then the 360Precision Adjuste is it. As well as being light, precise and compact, it is an unarguably elegant design. In short, everything you could want in a panorama head, whether you're shooting for ultra-high-resolution print work or interactive VR imagery.

Keith Martin



► The 360Precision Adjuste is small and light enough to be packed in any camera bag.

SLIDESHOW COMPILER

PulpMotion Advanced



Price £71 (£60 ex VAT)

Contact Aquafadas + aquafadas.com

Needs PowerPC 1GHz + Mac OS X 10.4.4 + 512MB Ram

Pros Innovative slideshow creation + Useful 'regions of interest' feature + Audio commentaries

Cons Poor text control + Awkward audio handling + No pan and zoom

PulpMotion Advanced is the latest

version of Aquafadas' slick slideshow compiler, adding greater user control, audio annotation, and several new themes and features. Slides and movies are displayed sequentially using a variety of special effect themes. Some feature complex 3D environments, such as books where the images are revealed as the pages are turned, or rendered art galleries in which images are hung on walls that you can pause in front of. Others pan along a wooden shelf, while some are more abstract, with images sliding onto the page or merging from several translucent copies. There are even plainer environments that simply show the image on the left with the caption sliding in from the right.

Multiple audio tracks can be added to a composition, with an internal audio editor that allows you to select portions of songs. It's not an easy process, though. You have to drag separate sliders rather than dragging the waveform itself, and there's no audio preview as you scrub along the track. Audio can be assigned to individual or multiple slides, or to the whole composition, which can then be set to last as long as the audio track, with individual slide timings adjusted automatically. There's no way to ease in and out between tracks, though – it's a sharp transition. However,



▲ One of the page-turning themes. But notice how the caption cuts off half way through the sentence.

the ability to add audio commentaries through an iSight or external camera is a welcome feature.

New to this version is a feature called 'Regions of interest', which allows you to specify a number of rectangular areas within a single image, each with its own caption. When played, each of these areas will appear by itself at full-screen, with the camera panning over each one before pulling back to reveal the segments rotating into place on the final image. This is a useful tool, enabling each slide to tell a story in a more convincing way, though the feature is only available for a handful of the included themes. In the others, it will just be ignored.

As we've come to expect from Aquafadas, there's a tremendous amount of user control here. You can set the texture and colour of gallery walls and floor, for example, or the precise shade of the translucent rectangles that float in the background of the more avant garde

themes. With all the control neatly divided into simple, manageable panels, customising the finished effect is straightforward. Finished compositions can be exported to a variety of formats, such as an iPod, the web or a DVD.

Text can be added as captions and displayed in different ways according

to the current theme. The font size is set for the whole theme, but there's no auto adjust feature to cope with long captions – and the default text size varies from theme to theme. This means that if you type a caption reading, say, 'Here we are on holiday' on a slide in one theme, you may find that when you change to another theme the caption reads 'Here we are on'. It's up to you to check each caption to make sure it fits.

There are other text handling problems, too. The default title for each theme is 'Composition Title', which can be changed in the relevant Composition Settings panel. This means that when you switch to a different theme, the title is lost and replaced with 'Composition Title'.

With all themes, the image will zoom to its final size, and stay there. But in some cases this means that the title is half chopped off at the top of the screen.

While the themes are entertaining, some are more ambitious than the technology can support. With the book themes, for example, the images don't appear until after the page is fully turned, which spoils the effect. There's no way to create a simple Ken Burns effect pan and zoom across an image either. After the transitional animation each image has to fit within its frame, occupying a portion of the screen, according to the preset built into each theme.

Whether you like PulpMotion depends entirely upon how much of a fan you are of built-in themes. For many, their tricky appeal will soon fade and their undoubted ingenuity tends to swamp the images, which can be both distracting and irritating. ❌

Steve Caplin

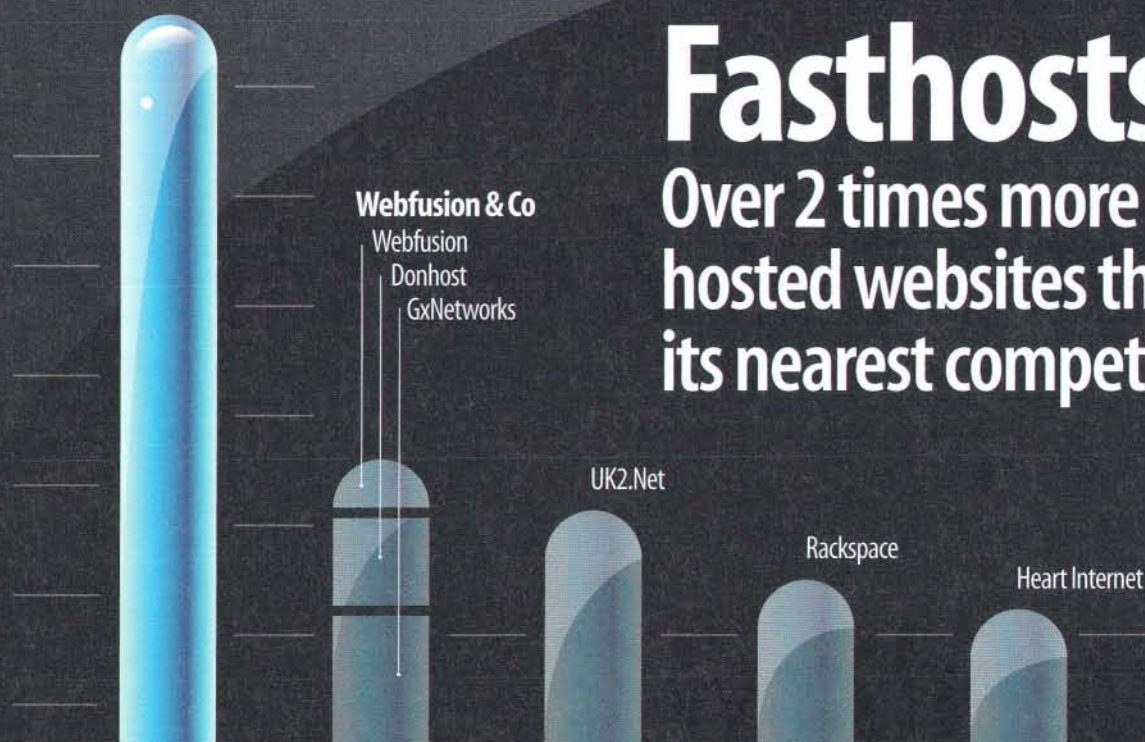


◀ The Movie Gallery themes walk us through a gallery, pausing in front of each image.

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MULTIFUNCTION DEVICE Lexmark X9575



Price £180 (£153 ex VAT) from pcworld.co.uk

Contact Lexmark + lexmark.co.uk

Needs Free USB port or wireless network, phone line

Pros Wireless connection + Duplex print as standard
+ Fax + Five-year warranty

Cons Mediocre print quality + Moderate page print costs

Master of the 'early learning' style of all-
in-one design and with printers apparently
built up from a series of round-edged
blocks, Lexmark has topped off its range
with the X9575, a machine with all
the trimmings, but a very similar print
mechanism to many of its cheaper
siblings. The printer is part of Lexmark's
Professional Line and enjoys both a five-
year replacement warranty and the inclusion
of high-yield ink cartridges as standard.

The X9575 should fit in well with most
Mac setups, as it comes cased in ice white,
light grey, silver and smoked, black plastic.
There's a 50-sheet Auto Document Feeder
(ADF) on top, fitted to the lid of the flatbed
scanner, a control panel in front of this and
a 150-sheet paper tray below the controls.
At the bottom right of the front panel are
memory card slots for all the common types
and at the back is a USB socket, another
for a phone line and a stumpy aerial for the
alternative, wifi connection.

Lexmark does particularly well with the
design of its control panels. It provides
similar control functions to its main rivals,
but with fewer buttons, resulting in an
easier to navigate panel. There's a built-in,
60mm LCD display, used for both photo
preview and menu navigation, and a
number pad for dialling fax numbers.



▲ Though its looks have an accent on the functional, the X9575 doesn't match the print quality of its competition.

Supporting software is provided by the
Lexmark 9500 Series Center that, while not
being as sophisticated as the dedicated
OCR and document management supplied
for its PC customers, is adequate for printing
to the machine and scanning from it.

When it comes to testing the printer's
speed and output quality, you need to
start by looking at the manufacturer's
specifications. Lexmark is honest enough
to quote print speeds in normal print mode
as well as the industry standard draft mode,
which bears little relation to the kind of
printing most people do. The company
quotes normal mode speeds of 11 pages
per minute (ppm) for a black text page and
5ppm for colour.

We produced about half these speeds
for our five-page test prints, with results of
6ppm and 2.2ppm, respectively. This is not
a quick printer, though it does manage to
do better than some of its rivals when
printing duplex. Double-sided print has
become more important recently, as it can
save up to 50% of your paper costs, but

on most machines it's hampered

by the drying time of
the inkjet inks.

Before it can print
the second side, the
manufacturer needs
to be sure the first
side won't smudge.

The pigment-based
inks used by Lexmark
dry slightly quicker than
the dyes used by, for
example, Canon and HP,

so the X9575 finished our 20-side text print
in just over four and a half minutes, nearly
twice as fast as a top-end Canon Pixma.

Print quality is not all that it could be.
Even using Lexmark's latest EverColor 2
inks, text and graphics on plain paper look
fuzzy, as the ink spreads along the paper
fibres, something pigmented ink is meant
to reduce. Colours are reasonably vivid,
and black text printed over colour is well
registered and shows no signs of extra
bleed. Photocopying, even of colour
originals, is good, though copies tend to
come out with slightly lighter shades than
the originals.

Photo output is generally good, though
some colours come out darker than they
should and you may need to compensate
through software to get accurate prints.

Lexmark supplies its high-yield
cartridges with the X9575 and these
give better economy than the standard-
capacity ones. The printer uses two
cartridges, one black and one tri-colour,
though you can replace the black cartridge
with a tri-colour photo one for improved,
six-colour photo printing.

Using Lexmark's published ISO page-
yield figures gives page costs of 3.4p
and 5.7p for black and colour pages,
respectively. The colour cost is quite good
for this class of machine, though the black
print cost is on the high side.

Overall, while the X9575 is easy to use
and has most of the features you might
want, it's still the print quality that needs
attention. In this context, the term
Professional looks like a marketing tweak,
rather than a technology upgrade.

Simon Williams

◀ The X9575 is simple to use and has
most of the features you will need.



USB MICROPHONE

Terratec iQuader



Price £199 (£169 ex VAT)

Contact Terratec + terratec.co.uk

Needs USB 2 port

Pros Exceptional audio quality + Easy to set up
+ Headphone monitor

Cons Level controls are fiddly



▲ The iQuader is simple to use and to set up.

Terratec's iQuader is a pencil case-sized stereo USB microphone aimed at creative professionals who need an easy way of capturing high-quality audio on their Mac.

Inside the unassuming case there's a preamp and an analogue limiter which prevents digital distortion. The iQuader supports sampling rates from 32kHz up to 96kHz, though for most applications the CD-quality 44.1kHz should suffice.

There's a USB port on the back of the case and a 3.5mm headphone jack flanked by level controls for microphone and monitor on the front. There's a sleep button on the top which is encircled by a status LED.

Setting up and using the iQuader couldn't have been easier. We plugged it into a spare USB port and selected it as the default input in Audio MIDI Setup in the Utilities folder. We then fired up GarageBand to test it. The excellent manual gives details not only on how to set up the iQuader with Mac OS X, but how to use it to record audio in GarageBand, Logic and Cubase. Our only concern while using the mic was that the level controls on the front are recessed and difficult to adjust.

Audio quality, as you would be entitled to expect from a microphone which costs £200, was exceptional. We sat the iQuader

on a desk just under our monitor and reasonably close to a Mac mini whose fan was going at full speed. The result was a recording so crisp, rich and free from background hum that it could have been recorded in a studio. It was that good.

While the iQuader is overkill for VoIP, if you regularly podcast but can't justify the expense of a studio, record voiceovers for video or slideshows, or even if you are a musician who captures moments of inspiration while in front of your Mac, then the iQuader is ideal. It's not cheap, but the end result is well worth the expense.

Kenny Hemphill

Buy a Mac, get a FREE iPod nano!

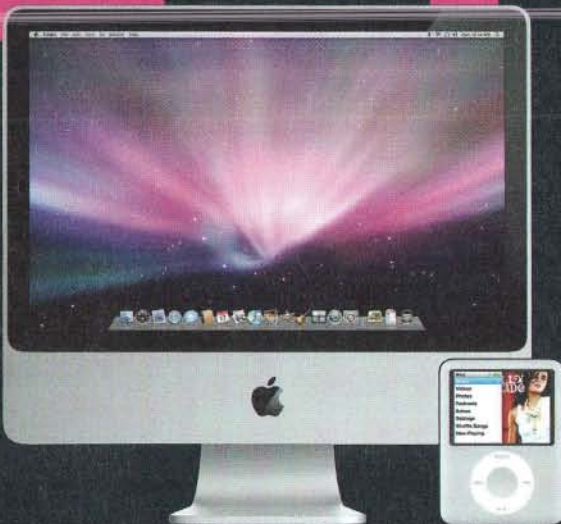
Square Group launch new High Wycombe store on Saturday June 21st

At Square, we love Macs. And we love iPods. So to celebrate the launch of our stunning new flagship store in the Eden centre, High Wycombe, the first 20 people to buy a Mac from us on launch day will also receive a FREE 4GB iPod nano!*

Our new stunning showroom is a mecca for everything Mac related and we invite you to come along to check out all the latest cool products. Including Bose home entertainment systems, our pick of the best iPod accessories and everything you need to complete your digital lifestyle.

Join us on Saturday June 21st for our launch at 10am. We look forward to meeting you.

*One free iPod per customer. Subject to availability. Conditions apply.



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HIGH-DEFINITION CAMCORDER

Sony HDR-TG3 AVCHD Camcorder



Price £600 (£510 ex VAT)

Contact Sony UK 08705 111999 + sony.co.uk

Needs Intel processor + Mac OS X 10.5 + iMovie 08

Pros Flash memory recording + Great handling

+ Full connectivity

Cons Awkward zoom control + Touchscreen can get messy

Sony's impressive new HDR-TG3 is a slim, highly portable camcorder that uses flash memory cards to record and replay high-definition movies and stills. Dubbed by its maker as 'the perfect partner for nights out or weekends away', it's not difficult to work out who this titanium-bodied solid-state camera is aimed at. It's small enough to fit into a smallish pocket or bag, yet comes with a range of features that would be hard to find on comparably small standard-definition models.

The TG3 employs an Mpeg-4-based AVCHD compression system to write full-specification, 1920 x 1080i high-definition video clips to Sony's proprietary Memory Stick Pro Duo memory cards – a 4GB card is supplied with the camera. It can also record and replay standard definition movies using Mpeg-2 – the compression system used by standard DVD.

The camera uses a 1/5in, 4-megapixel, ClearVid Cmos image sensor to produce 1.43-megapixel widescreen 16:9 pictures, and if you want to shoot in the traditional 4:3 ratio, the effective resolution is 1.08 megapixels. Although not the resolution you'd expect from a comparable digital stills camera, the TG3 allocates 1.99MP for 16:9 images. It's possible to shoot stills while simultaneously recording movie clips, too.

Four high-definition recording modes are available, the highest of which is HD FH which, at 16Mbps/s, is slightly less than that used by the Panasonic HDC-SD9 and the Canon HF100. However, there's no doubt that in good light the images are exceptional, and more than acceptable even in mid-range lighting conditions.

The Sony features an F1.8-2.3 Carl Zeiss Vario-Tessar 10x optical zoom lens, with a 120x digital zoom that's not so high it's impossible to see what's being pictured. We like the Face Detection feature, in which the camera identifies human faces in order to optimise the image processing of skin tones, too. As an antidote to handheld wobbliness, the TG3 utilises Super

Electronic Image Stabilisation rather than the optical stabilisation of its bigger cousins. However, given the target usage, this succeeds in doing its job and we were able to grab some reasonably smooth shots even when shooting at the long end of the 10x optical zoom.

Unlike several of its counterparts, the TG3 doesn't offer a 25P Cinema Mode for progressive frame recording. Instead, it relies on a Progressive Shutter digital effect that isn't quite the same thing. Its 1080-line interlaced field recordings looked good when we connected the TG3 by the HDMI and component connectors to two HD monitors, though.

In order to recharge its Li-ion battery and also to connect to other devices, it slots comfortably and easily into a Handycam docking station that can be left permanently connected to a TV display and AC mains supply. Other connections on the camera itself include a combined component/AV composite video/audio outlet (cable supplied), mini-HDMI socket and a USB 2 outlet. The Sony can be connected to a Mac with a USB cable which, when using iMovie 08 running on an Intel Mac OS X Leopard machine, will facilitate import, editing and the sharing of the AVCHD video clips after first performing an initial conversion to

▲ The Sony records fabulous-looking HD pictures, which can be viewed on its touchscreen display.

► This highly portable camcorder will even fit into a small bag.



QuickTime .mov files using the excellent Apple Intermediate Codec.

The HDR-TG3 is further proof of Sony's continued commitment to the radical AVCHD format that facilitates high quality HD video recording using solid-state media, and for a small, compact device to provide such fabulous full-HD pictures is a feat in itself. On the negative side, we found the rear-mounted rotating zoom control a bit awkward to use when actually recording, and mucky fingers smeared the LCD touchscreen very quickly. However, the TG3 lived up to expectations by enabling us to shoot some excellent quality clips which, when edited in iMovie 08, looked fabulous on a large LCD display. Even though it's quite a bit more expensive than its nearest competitor, the Panasonic SD9, it's well worth a look and highly recommended.

Colin Barrett

NETWORK ATTACHED STORAGE DEVICE

Buffalo
LinkStation Mini 1TB

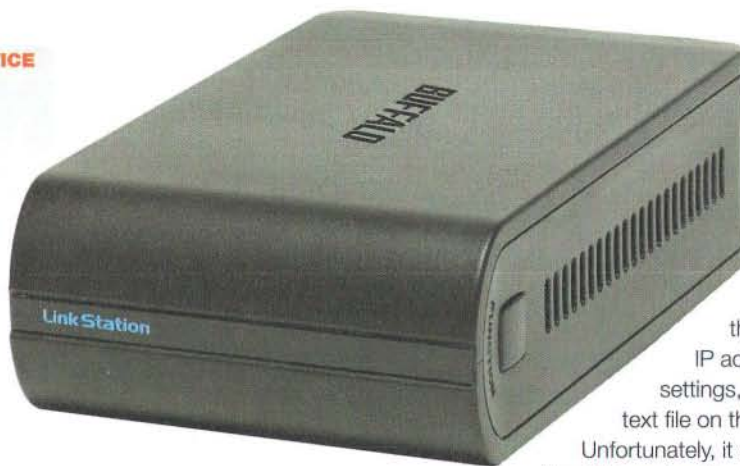
Price £295 (£251 ex VAT) from lambda-tek.com

Contact Buffalo Technology + buffalotech.com

Needs Mac OS X 10.3 or later + Ethernet or router

Pros Tiny + Good value + iTunes and media servers

Cons Setup could be more straightforward



◀ Buffalo's LinkStation Mini comes with a whopping 1TB of storage.

This LinkStation Mini is an almost infeasibly tiny 1TB dual-disk Raid Nas device. It's based on two 2.5in 500GB disks, which sit inside the black plastic case, and is the same width and length as a regular 2.5in portable hard drive, and about twice the height.

Around the back of the case are a Gigabit Ethernet port, power socket, power switch and USB interface. Air vents on three sides of the LinkStation Mini ensure that it doesn't overheat, which is important because there's no fan.

The Ethernet port auto-senses whether it's connected to a 10, 100, or 1000-based

T network, while the USB port can be used to connect a digital camera or USB memory stick in order to automatically download photos or data. It can also be used to expand the capacity of the LinkStation Mini by adding an extra hard drive.

The drives can be configured as Raid 0 (striped) or Raid 1 (mirrored). Most impressive is the range of network features, which include an iTunes server, DNLA compliant media server and a print server.

Setting up the LinkStation Mini was straightforward, though not as easy as it should have been. A quick start utility on the accompanying CD guides your through the

setup process and installs LinkStation Navigator. This should then locate the Mini, determine its IP address and other settings, and save those on a text file on the Desktop.

Unfortunately, it didn't. It couldn't see the Mini, and neither could our router. We had to restart the Mac before Navigator and the router connected to the Mini and even then there was no text file on the Desktop. However, clicking on the unit's icon in the Navigator window provided the information we needed to connect to the Mini in a browser and from there we were able to set up users and groups, shared folders and change the Raid setting from 1 to 0.

Once set up, the Mini is a breeze to use and having a full-blown Nas with 1TB of storage in such a tiny box is a real boon. Best of all is the price, which at less than £300 is excellent value.

Kenny Hemphill

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Dreamweaver + Fireworks CS4 Betas

Adobe has released free betas of Dreamweaver and Fireworks that show off new features, better team working and tighter integration with the rest of Creative Suite. We take a look at what CS4 will have to offer web designers on its release.





Words Ken MacMahon

Image Patrick Boyer ([Illustrationweb.com](http://www.illustrationweb.com))

Adobe's announcement of new

Dreamweaver and Fireworks CS4 public betas marks the beginning of the next stage in Creative Suite's development cycle. These web applications have some ground to make up to fit in with the look and feel of programs like Photoshop and Illustrator, though.

Adobe says it has gone to a lot of effort to find out how developers and web designers are using existing versions of Dreamweaver and Fireworks to build websites. Because an increasing number of software technologies are becoming involved in the creation and delivery of web pages, it's unrealistic to expect to produce most of it in a single application.

The challenge for Adobe is to better integrate Dreamweaver and Fireworks with these technologies as well as its own content creation applications. If the evidence of these betas is anything to go by, Adobe will soon be in a position to deliver that.

Both the Dreamweaver and Fireworks betas are available for download from the Adobe labs website at labs.adobe.com. They expire after 48 hours unless you have a valid CS serial number, in which case they will remain usable until the production versions become available.

One word of warning though, don't delete the Fireworks beta by dragging it to the trash. The consequences aren't dire, but you won't be able to re-install the current and possibly future betas. Use the uninstall application in the application folder instead.

```

<SCRIPT SRC="http://www.images.adobe.com/www.adobe.com/lib/spry/p1.6/widgets/accordion/spryaccordion.compressed.js"></SCRIPT>
<LINK HREF="http://www.images.adobe.com/www.adobe.com/lib/com.adobe/template/home/spry/accordion.css" REL="stylesheet" TYPE="text/css">
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```


● DREAMWEAVER CS4 BETA

For most of its decade-long existence Dreamweaver has successfully managed to live a dual existence. It's a Wysiwyg web authoring application for those who lack the skills to hand-code HTML, while at the same time providing a productive environment for developers fluent in HTML, CSS, JavaScript, PHP and the other languages of web development. It may not please all of the people all of the time, but it comes closer than anything else.

Websites are increasingly the product of multiple technologies and a single HTML

page is often the sum of any number of interacting elements. The big challenge for Adobe has been to accommodate all of these elements within a single development and design environment.

If there's one word that sums up the Dreamweaver CS4 beta, it's integration. As you'd expect, Dreamweaver has been given the look and feel of the other applications within Creative Suite, and also has improved its integration with Photoshop, Flash and other Adobe applications. More importantly, a heap of features have been added that allow you to see and work with external

content, including CSS, JavaScript and Ajax, via Adobe's Spry framework, without ever leaving the program.

For old hands, the first and most apparent difference will be the interface. Though it now shares a common theme with other Adobe applications, the Macromedia legacy is still apparent. The screen is divided into horizontal panels containing Code view, Design view, properties and a Results panel group at the foot of the screen, which contains, among other things, search results, O'Reilly reference materials, compatibility and broken link reports.

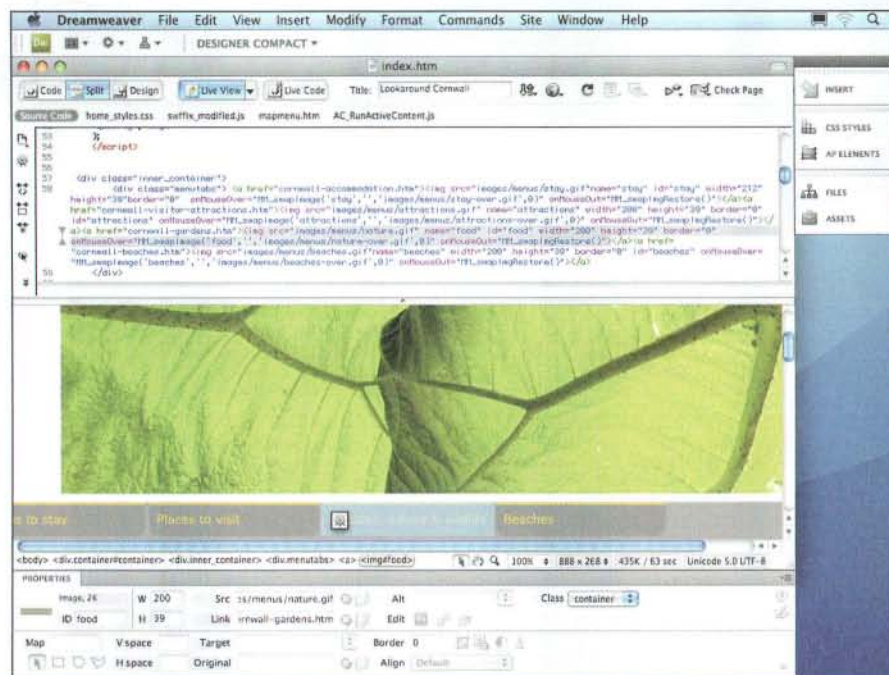
Those who find it difficult to adapt to the new design can emulate the old-style layout by selecting the Classic option from the Workspace Configurator pull-down menu, which provides layout options for designers, application developers, coders and others as well as allowing you to create and save your own. The panels in the right-hand sidebar can be collapsed when not in use and the panels can be floated to take advantage of a dual-screen setup.

As before, you can view either the source code, a Wysiwyg design layout, or split the screen to show both. You can now also split the screen vertically to show code and Design views side-by-side.

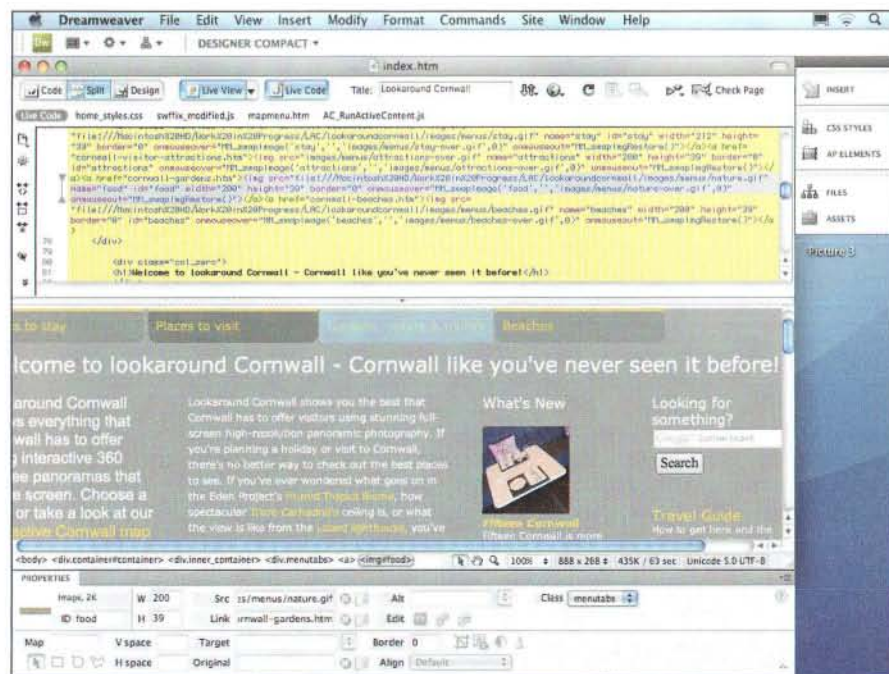
But all this is mere window dressing compared with Live View, Dreamweaver's new killer feature and one that all but spells the end of the need to preview your pages in a web browser. Live View uses Webkit – the open source rendering engine used by Safari, the iPhone and Adobe Air – to display a live preview of web pages as they would appear in a web browser.

Unlike Design view, you can't edit page elements in Live View; nothing you do in the Live View window will change your code. You can, however, see all page elements as rendered by the browser, including JavaScript, server side includes and dynamic page elements produced by PHP. Adobe still has some work to do to get Live View running smoothly. It had problems with server side includes and a Javascript Flash loader on the (W3C validated) pages we tried it out on, despite being perfectly happy to display these elements in Design view. But this is a beta, and if Live View delivers what it promises, it will be a huge asset.

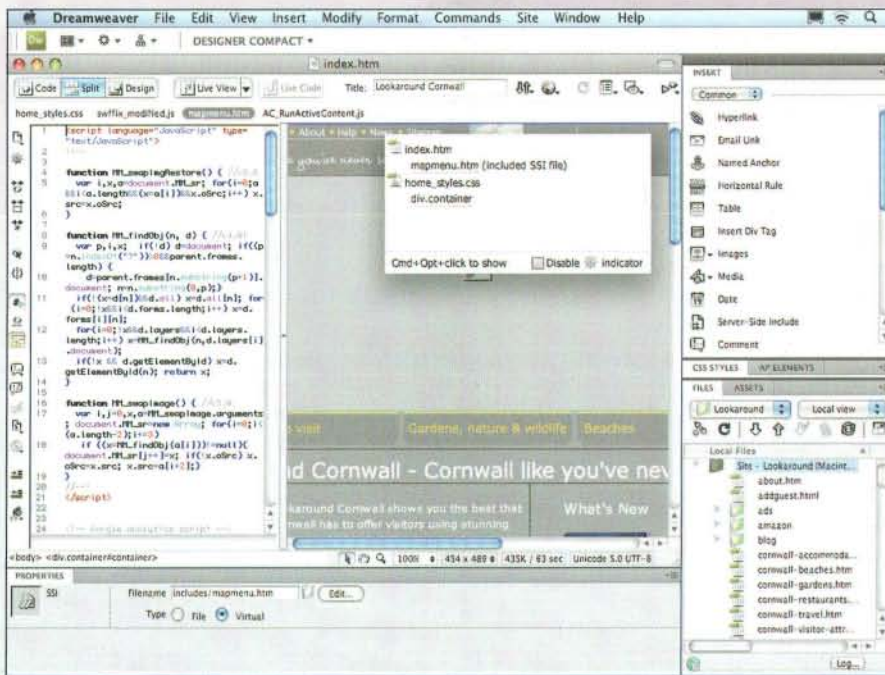
Complementing Live View, Live Code displays the browser rendered page in code view, providing the ultimate debugging tool. Using Live Code, you can, for example, see the results of a database query and edit the PHP script that produced it, or the style sheet that formatted it.



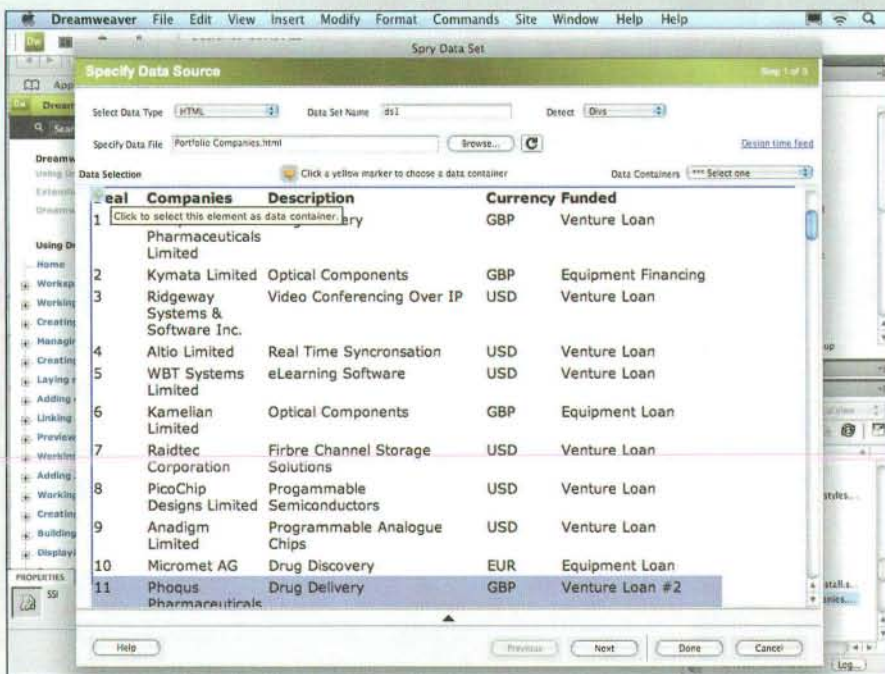
▲ Live View displays your page exactly as a browser would, including Javascript behaviours, Flash, everything.



▲ Live code shows you the code as rendered by the browser, a huge advantage when debugging external elements.



▲ Code views can be split vertically. The Related files bar and Code Navigator help keep track of all page elements.



▲ HTML datasets make it easy to build sites that give the mimic the behaviour of dynamic, database-driven pages.

Live View also allows you to freeze JavaScript effects so you can target code segments in the Live Code panel that only appear when the page is in a given state – for example, when you move a mouse over a pull-down navigation menu.

Dreamweaver CS4 beta has also introduced new features to make locating and editing external content easier. The Related Files bar displays related files on a button bar just below the document toolbar. To edit a file, you click on its button and the code appears in the Code view. Used in conjunction with Live View, you can use the

Related files bar to, for example, make quick edits to a style sheet while you view the results in real time.

Another new feature that makes light work of locating and editing both on-the-page and external elements is the code Navigator. This is a pop-up window that displays the related content of any element in Code, Design, or Live View when you Command-Alt-click it.

Individually, Live View, Live Code and the Code Navigator are three productivity enhancements that will considerably ease the burden of designing, developing and

debugging sites. Collectively, they add up to significantly more than the sum of their parts and will make a huge difference to developers weary of the well trodden path from code view to Preview in Browser, then to Show Source and finally back to Dreamweaver to hunt through the file tabs for style sheets or JavaScript code.

The new HTML datasets feature provides a quick fix solution for situations where you want to repackage existing static content in a more dynamic way without starting from scratch and implementing a database-driven solution. It also provides a way for those without the technical resources to easily deliver dynamic content.

HTML datasets are produced from existing static pages using the new Spry dataset wizard. Typically, you might want to pull content from a table, but the wizard can recognise content within Divs, lists or custom mark ups providing they constitute a 'recognisable pattern'. The Spry dataset wizard applies markers to areas of the page that it recognises as containing data. Click on the marker that contains the data you want and the wizard extracts it in tabular format. You can then elect to have the wizard format the data, or do it yourself.

The resulting page pulls data from the static page on the fly to build the new page dynamically. When data on the static page is updated, the dynamic page uses that new data. It's easy to see how HTML datasets could be used to produce an interactive event calendar without the need for a database and all that involves in terms of installation and maintenance.

The CS4 beta expands the library of Spry tools – the Ajax framework that makes it easy for those without a coding background to implement JavaScript effects and widgets – introduced in CS3 in other directions. A new Spry tooltip command adds pop-up information bubbles to links and three new form validation widgets have been added.

Best practice dictates that behaviour code and CSS styling doesn't belong in your HTML files but, on the principle of 'if it works, don't fix it', such transgressions tend not to be remedied. A New Externalize JavaScript command provides a painless means of removing Javascript code and CSS styles to external files.

Other improvements include the ability to drag-and-drop Smart objects from Photoshop, authoring support for Adobe's Air desktop application environment, and integration with Subversion.

All this adds up to a very exciting beta that promises to be a must-have upgrade when the production version appears.

● FIREWORKS CS4 BETA

When Adobe acquired Macromedia, the consensus was that an application that fell midway between Photoshop and ImageReady probably didn't have much of a future. But Fireworks has survived against the odds by re-inventing itself as a web design and prototyping tool, allowing the creation of web pages in a visual environment and providing tools to turn those visuals into HTML pages.

As with Dreamweaver, the Fireworks CS4 beta interface has been overhauled. Panels can be collapsed to create more

space, or undocked and floated, and the Flash-based CS3 panels now have a more consistent look. The autoshape and symbol properties now appear on tabs of the Properties Inspector, and many of the commands now provide previews.

Aside from the look and feel of Fireworks, one of the most useful interface enhancements is the introduction of Smart Guides, which allow you to quickly align objects relative to each other or to the page. Dotted rules appear when you drag page elements into position, aiding with alignment and snapping to the rules. Measurement

tooltips display the distance between guides or show shape dimensions making it possible to accurately size and position page elements in a single step, rather than the create-and-adjust two-step that Fireworks users have become accustomed to. A new measure tool further aids position by allowing you to create permanent markers on the page, for example to set margin or column widths.

One of the big productivity improvements in Fireworks CS3 was the introduction of the Nine-slice scaling tool. By dividing a graphic element such as a round-cornered text box into nine segments, it was possible to resize it without distorting either the text or corner radius. In the CS4 beta, the Nine-slice scaling tool works, like the other transformation tools, on any object. It's no longer necessary to first create a special nine-sliceable symbol.

Another CS3 feature that has been developed further is Styles. Fireworks CS3 introduced Photoshop Layer Styles but, until now, it has lacked the ability to define and apply global styles. If Fireworks is to make the transition from a graphics application to a website design tool it will need to borrow more from InDesign and less from Photoshop, and the introduction of Live Styles is one step in the right direction.

Live Styles allow you to simultaneously update all objects to which a style has been applied. Previously, you could only make a global style change of this sort to symbols, or by selecting all of the objects before applying the change. The Styles panel displays all styles used in the current document as well as a drop-down menu with themed style presets.

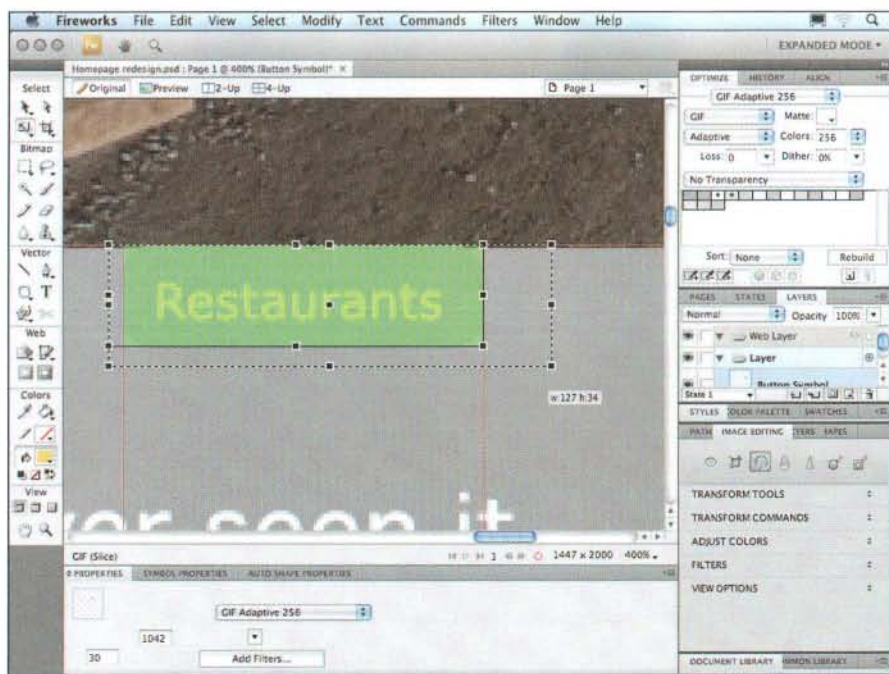
The Style panel Options menu includes new style options, which are mirrored in the Properties Inspector. These include Clear Overrides, Break Link to Styles and Redefine Style. The latter works in the same way as redefining a paragraph or object style in InDesign. You simply edit the styled object and select Redefine style either from the Properties inspector or the Styles panel Option menu. The style is redefined and all objects to which it is applied are updated.

This is similar to the way in which you may create an external stylesheet elsewhere, which is imported and applied to named elements on the page. This lets you make changes to multiple elements by changing one descriptor in a separate location.

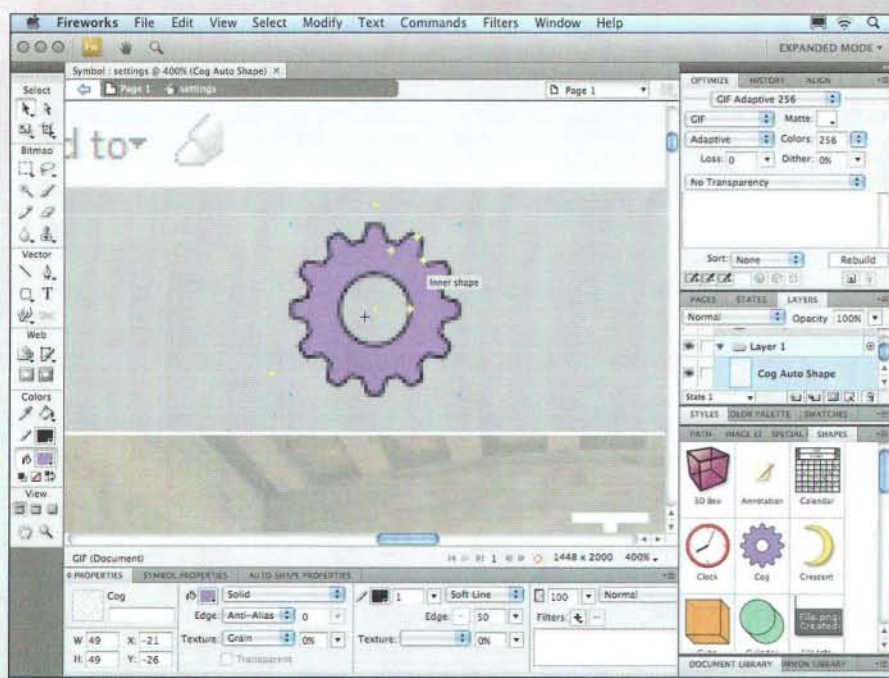
One of the drawbacks of earlier versions of Fireworks has been the lack of support for outputting standards-compliant CSS-based HTML pages. This cul-de-sac has restricted Fireworks' role to one of design



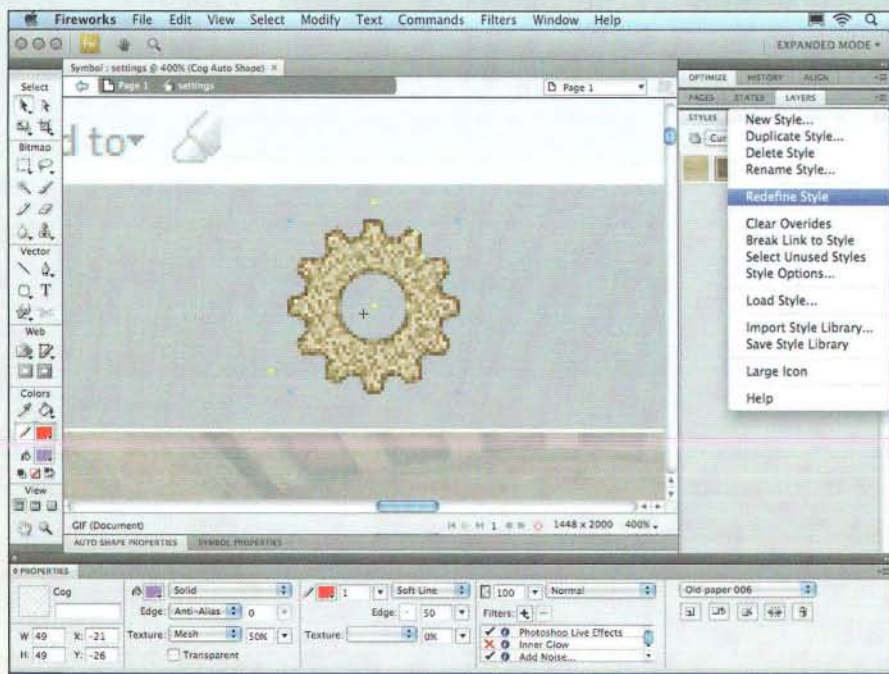
▲ Fireworks Smart Guides appear when in proximity to other page elements, aiding accurate positioning.



▲ Nine-slice intelligent scaling can now be applied to any object.



▲ The new place editing feature means the end of having to edit parameters in dialog boxes.



▲ Applying global style changes is accomplished by redefining styles.

prototyping and image optimisation. Pages are sliced and optimised and the graphics used in hand-coded or Dreamweaver-constructed pages.

CS4 has addressed this issue in two ways. First, it has a new CSS and images export option, second it allows you to export pages to PDF. In the beta, the CSS and Images export doesn't produce pages that most developers would regard as finished, but they certainly provide a basis on which, with a little editing, a CSS-based site could be built. And they are a huge

improvement on the tables-based, spacer-packed, jigsaws of old.

You can opt to include CSS definitions on the page or in a separate stylesheet. Providing there are no overlapping elements, the layout is rendered using floating divs. Creating slices and manually defining divs provides some control over the CSS structure and text is rendered as CSS-styled text with each paragraph in a separate div. It also means you'll get more consistent rendering of pasted text. This will be a boon for anyone who edits the text-based content

of their site in a plain text application such as TextEdit rather than typing directly into either Fireworks or Dreamweaver themselves.

The ability to export to PDF provides something that Fireworks has long lacked, a reliable delivery mechanism for client approval and commenting. While a PDF won't demonstrate the interactive elements on a web page, it is possible to use hotspots to link to other pages. In any case, at this stage a client will be more interested in how sites look, rather than how they work – something that is more likely to be demonstrated online at a later stage in the development cycle.

Another new output option is Demo current Document which exports an XML file with Jpeg images linked to a Flash-based presentation viewer. It sounds promising, but at this stage that's all it is, as the beta we used outputs only a Jpeg file of the page.

The Fireworks CS4 beta now uses the same type engine as Photoshop and Illustrator. There's a new type feature – text inside a closed path – and you can copy and paste double-byte (that is Chinese, Japanese and Korean) characters between applications. The font list in the Properties Inspector has been organised into font families, rather than just a long alphabetical list, making it much easier to find typefaces in large font libraries. This makes it more appealing to professional designers, who routinely work with grouped fonts rather than single faces. Indeed, applications such as Suitcase and FontBook are designed precisely to facilitate working in this way.

What we've seen in the Fireworks CS4 Beta is enough to convince us that it will continue to play an important role in web page prototyping and graphics optimisation. We like the emphasis Adobe is placing on delivering interactive visuals to clients in formats they can use, like PDF and Flash. If Adobe can find easier and better ways to turn what Fireworks produces into something that more closely resembles a finished website, that would be even better. ☘

WEB DEVELOPMENT Dreamweaver CS4

Contact Adobe + labs.adobe.com

Needs PowerPC G5 or Intel processor + Mac OS X 10.4.11 or later + 1GB of free hard drive space + Internet connection

WEB PROTOTYPING AND GRAPHICS Fireworks CS4

Contact Adobe + labs.adobe.com

Needs PowerPC G5 or Intel processor + Mac OS X 10.4 or later + 1GB of Ram + 1.8GB of free hard drive space

Sound

Words Jonathan Wilson

After the distinctly muted reception that greeted Audition, Adobe hopes to answer its critics with the release of its latest audio- and video-editing application – Soundbooth CS4.

Having ‘acquired the technological assets’ of Syntrillium Software in May 2003, Adobe subsequently rebranded the latter’s Cool Edit Pro audio-editing software as the PC-only Audition, aimed at audio professionals. Then last year, Adobe debuted Soundbooth and pitched it specifically to video editors who need to work with audio, but for whom Audition’s comprehensive feature set was overkill. It was also available for Mac and PC.

Now, Adobe has released a public beta of Soundbooth CS4, available free of charge to anyone, although the minimum system requirements will knock back a swathe of Mac users, as will Adobe’s stipulation that only registered users of CS3 can use the beta beyond the two-day grace period. However, for those that do make the grade, Soundbooth is well worth a look, even if only for two days. For editing audio to video – and even for recording, arranging

and editing audio on its own – Soundbooth has a lot to offer, and is both easy to use and sufficiently powerful to get the job done well with the minimum of fuss (apparently Soundbooth’s core manifesto). While it displayed promise, Soundbooth CS3 had obvious shortcomings, notably the restriction to a single stereo audio file.

Judging from this beta release, Adobe has taken heed of the lukewarm reaction that Soundbooth CS3 received. The company appears to have spent the past year quietly importing some of the key features from Audition before effectively pushing that application out of the CS nest – Audition is now solely available as a standalone product, having been replaced in the Production Premium bundle by Soundbooth.

Crucially, CS4 allows multitrack recording, editing and arranging of audio files (up to 96kHz), as well

booth

CS4 Beta

as the use of multiple Soundbooth Scores – automatically generated soundtracks that are perfectly cut to fit your video's duration). Its multitrack interface is much like every audio sequencer, with Mute and Solo buttons and Volume and Pan controls, and graphically dragging tracks around to line them up in the Editor window (and the track overview) is both familiar and intuitive.

Also new is non-destructive editing; the Snapshots feature, to freeze your work in-progress at key stages and roll back if necessary; beat detection for better loop creation; volume level matching across multiple audio files; greater MP3 support and flexibility (such as compression previews); and a new file format – .asnd (Adobe Sound Document). This latter feature means that all the audio clips used in a multitrack project are saved as a single file, similar to a layered Photoshop file. However, you have to be careful how you handle audio files imported to a Soundbooth project, as each file is copied and stored in the project, not referenced (video files are still referenced). Using multiple instances of the same audio file in a project

means that multiple copies will exist, but any changes made to the original will not update the copies. The .asnd format is not compulsory, though – saving as AIFF, Wav, MP3 or .mov is also possible.

Soundbooth can also capture recordings from scratch and process the results. You can record multiple tracks from multiple sources simultaneously. Although only single-pass – not cycle – recording is possible. Soundbooth will also helpfully auto-append reference data to file names, such as date and time stamps. We also liked the fact that you can drop in markers while recording. This is great for identifying key passages or mistakes as they happen, so you know what needs to be worked on later. Editing files is also straightforward, if somewhat rudimentary. There are no fancy audio-slicing tools, but cut, copy, paste, and mix paste do a functional job of moving waveforms – or parts thereof – around an arrangement. All edits take place at zero crossings by default, which makes up in pop and click-free results what it lacks in flexibility.

The fades functionality is similarly efficient. Simple fade in/fade out settings can be easily controlled

by the buttons in the Editor panel or from the Processes menu. For more precision (or creativity), you can click and add keyframes, which become joined by a line. Then it's a simple case of moving individual keyframes up or down to adjust the slope and fade accordingly. In terms of processing audio, 15 effects are supplied, which cover the most common requirements (such as compression, EQ, reverb), although third-party VST and AU plug-ins are regrettably not supported. Soundbooth also has its own restoration and analysis tools, such as the Spectral Frequency view, the Auto Heal function, Remove Clicks and Pops, Remove Rumble and Remove Noise. We were able to produce perfectly professional results using all these effects and tools. Most of the new features in Soundbooth CS4 are a great leap forward for the program.

The Snapshots feature is great for capturing everything (effects, fades, volumes) about a project at a precise moment in its evolution, although the trade-off for this freedom is that because each Snapshot creates all-new copies of every audio file used, your .asnd documents can get very large, very quickly.

Full support for XMP metadata is also new and Soundbooth handles the implementation intelligently, including the ability to trigger Flash cue-points using markers and to recognise metadata from (and export it to) other Adobe applications. The Dublin Core metadata standard is also supported. Likewise, the improvements to Soundbooth Scores – including support for multiple Scores within a project and the ability to edit them like standard audio clips – should please those who need professional results quickly. Keyframes offer easy control over the flow of a Score and the new Library Panel allows Scores to be browsed and previewed prior to import, which saves a lot of time.

One new feature that didn't impress us was the speech transcription. In practice, all we got was nonsense, even from a clear spoken-word recording, using the High setting for the best-possible accuracy. Adobe has pointed out that only the American English pack is included in the beta – British English apparently being something else entirely – but we are unsure how much better this feature will get for



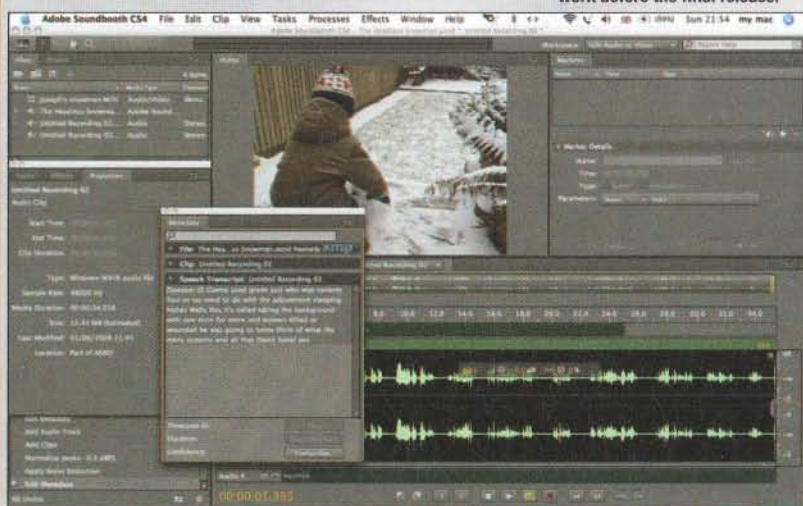
▲ The Effects Rack (left-hand side) can host up to five different effects per track. Here we've opened the Simple versions of four plug-ins (right-hand side).

AUDIO EDITING SOFTWARE Soundbooth CS4 beta

Contact Adobe 0800 028 0148 + adobe.com

Needs Intel Core Duo processor + 1GB RAM (2GB for HD playback) + Mac OS X 10.4.11 + QuickTime 7 + 1280 x 900 display with 32-bit video card and 16MB of VRAM + 10GB hard drive space (not flash-based storage)

▼ The Speech Transcription feature in Soundbooth needs either a perfectly clean, CD-quality recording or a lot more work before the final release.



launch. There's also no way of training the speech recognition to improve over time.

Garbled transcriptions aside, Soundbooth CS4 holds great promise for its target market. It is straightforward to use, but deceptively powerful. Anyone familiar with Adobe products will feel at home and the interface has been subtly redesigned to present either one-click access or a tabbed display for the key functions.

It's also not awkwardly hobbled in any significant way, and only experienced audio editors will notice the absence of such things as plug-in support and automation. This is GarageBand for soundtrack work. There's also tight, round-trip editing integration with Premiere Pro, whereby edits in Soundbooth automatically update within the Premiere project.

It does have a resource-heavy workflow, in as much as the more work you do, the more files you import, so the more 'assets' you have to keep open – increasing the CPU strain – which may go some way to explaining Adobe's dismissal of PowerPC Macs. It's also not clear how you would upgrade if you found yourself outgrowing Soundbooth. With Audition a PC-only product, you'd have to look beyond Adobe for the answer, possibly to Logic Studio or Bias Peak.

On reflection, Soundbooth CS4 probably represents what Soundbooth CS3 should have been. From our experience with this beta version, video editors with undemanding audio needs will be well served by it. Some users will still want to perfect their audio elsewhere prior to importing it to the project – to take advantage of better plug-ins, for instance – but as a good-looking multi-track arranger with editing, looping, auto-score and video sync functionality, Soundbooth pushes all the right buttons.



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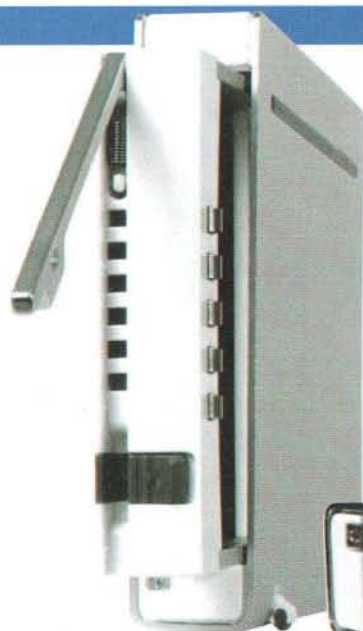


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also available separately

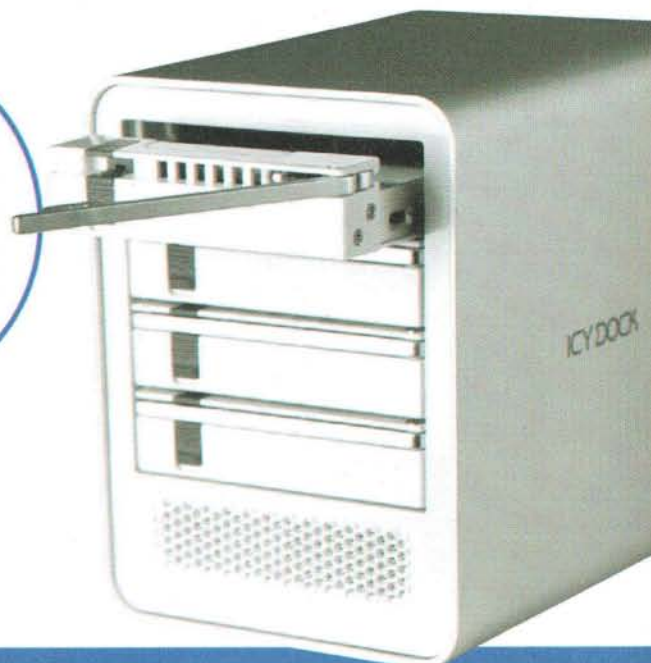
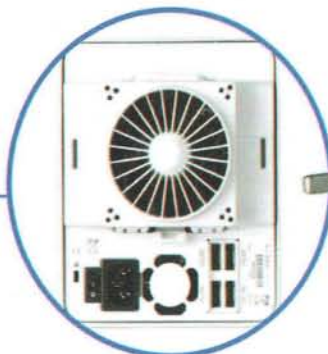


MB-561



ICY DOCK MB-561
External aluminium enclosure
for 4x SATA II HDD case

- LED indicator for power and data access
- Power switch on rear side
- Ball bearing fan (swappable)
- Integrated Power supply (200 W, 110-230 V)



**PLUG
& PLAY**

**HOT
SWAP**

Free calls for all

No bills + no sign-up fees + no hassle

Keeping in touch with friends and family by phone can be costly, especially if they live abroad. Thankfully, we have the answer – Voice over IP. Not only is it easy to set up, but it could save you a small fortune.

Words Kenny Hemphill + Alan Stonebridge
Image Retouching Linda Duong

Whether you use it to make free calls

over the Internet to friends, family or business contacts on the same network, or to make cheap international calls to regular landline numbers, Voice over IP (VoIP) is an easy way to save significant sums of money.

The best-known VoIP service is, of course, Skype, and for most users Skype means sitting at a computer with a handset or headset, and talking to someone at another computer. However, VoIP has much more to offer and even using Skype no longer means being tied to a computer.

Services such as Vonage and Sipgate are practically indistinguishable to the user from a normal landline telephone, with the notable exception that you either have to use a special telephone or plug your existing phone into a router or adaptor.

Yet for all its money-saving appeal, VoIP can often seem complex and difficult to get to grips with. How do you, for example, decide which service best suits your needs? And having done that, how do you decide what hardware you need?

These are among the questions that we've set ourselves the task of answering over the next few pages. We'll show you how to make free calls, tell you how much calls cost on the different VoIP networks in the UK, and help you get a grip on the hardware you need to buy.





Skype

Like iChat and MSN Messenger, at its most basic level Skype is a cross-platform instant messenger that can send text, audio and video to other Skype users for free. A Mac version of Skype's client software is available from skype.com and if your Mac is equipped with a built-in iSight camera and microphone, you can see and hear contacts on Windows and Linux.

Conversations with other users on the service are free, but Skype doesn't confine them to its own network. Its VoIP capabilities extend to allowing you to make calls to, and receive them from, regular landlines and mobile phones. So it doesn't matter if a friend or relative in a distant country has turned off their computer – they can still be called on their phone through Skype.

The compelling reason to make calls this way is the savings to be had. Calls made to phones aren't free, but they're typically a fraction of the cost of using the regular phone network. Instead, the call makes its way across the world as Internet traffic until it gets close to its destination. It's at this point that the call rejoins the phone network and reaches a normal landline or mobile phone.

The savings can be considerable. For instance, a call to an Australian landline costs 1.4p per minute, whereas BT's standard international rate rises from 11.5p per minute at evenings and weekends to a 27.5p per minute during the daytime. These higher prices can be stifling when catching up with family and friends as your mind will always wander back to mounting costs, so it's easy to see why Skype's cheaper calling

costs have led to it becoming one of the biggest brands in the VoIP market.

Making payments is flexible too, as you can choose the level of service to suit your needs. The most basic service, SkypeOut, lets you make cheap calls to other countries by paying up front for credit just like pay-as-you-go mobile phones, though the credit will expire if there's no activity on your account for 180 days. Ideal for infrequent users who want to spread their credit over a longer period.

The next option is to take on a monthly subscription in one of three bands offering: unlimited calls to a single country; a group of countries such as the EU or 34 countries from around the world. Like plenty of other services that describe themselves as unlimited, there's a fair usage limit attached, but it's a hefty 10,000 minutes per month, or just 80 minutes short of a whole week spent on the phone.

Calls to mobiles are excluded for some countries, but all calls to landlines are not restricted to a particular time of the day and there's no connection fee. Best of all, there's no lengthy contract. That's particularly good if you're visiting a country on a short visa and can't afford to be tied into lengthy mobile phone contracts, which often run for a minimum of 12 months. Instead, the subscription can be terminated at the end of the current month, and you can take up another subscription at your destination to keep in touch with those you've left behind in the UK.

Making outgoing calls is only half of the story. The SkypeIn option provides you with an online number and a regular phone number that can be dialled from a landline or mobile. You can choose a number from 21 countries, though some of them restrict availability to genuine residents, and numbers in popular areas such as New York are in short supply and not always available. Regular travellers can benefit from registering up to 10 online numbers to a single Skype account – one for every country where they do business or have acquaintances. Those contacts can then dial a number that appears to be local and they'll be charged at their local rates, despite the call being routed to you on the Skype network.

Several add-ons are available to make using Skype even more like a typical phone service. Included in monthly subscriptions, these add-ons are also provided as individual options to more casual users who want to take up voicemail, complete with personal greeting recorded through the software, but care little for caller identification and call forwarding, for example.

When using caller ID, there's no guarantee it will work with every destination anyway, as it depends whether the service provider that bridges the gap between Skype and the person you're calling drops the information.

Call forwarding to countries is included in monthly subscriptions for free, otherwise the feature is available but charged at regular SkypeOut call rates because Skype is effectively making a call to patch it through to you, wherever you are. Credit can even be used to send SMS messages from the Skype application in some countries, costing a competitive 6.4p to UK numbers.

The ability to pick and choose Skype's services to suit your needs and budget makes for an attractive service, and the software is very clean in its presentation. It's backed up with impressive prices that can translate into cheaper calls, if you spend a lot of time on the phone already, or else giving more time to catch up with people for the same money.



◀ With different payment options to choose from, Skype makes it easy to keep in touch.



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How to buy a handset

Mac users have a relatively limited choice of handsets to choose from as many of those that connect to a USB port need drivers don't have a Mac OS X version. However, we still have four options: a USB handset; a handset that connects directly to a wifi router; a mobile phone with built-in Skype and a headset which incorporates earphones and a mic.

Here we'll look at five phones which are designed to work with Skype – still the most popular way to make voice calls over the Internet. If you don't use Skype, or are planning on signing up with Vonage or a SIP (see p56) provider, first check their website for information on handsets and adaptors which will allow you to use your regular phone.

When deciding which type of device to buy, you need to consider how you're going to use it. If you plan to use it as a substitute for your main phone, you don't want to depend on your Mac being up and running in order to make or receive phone calls. So a phone that connects to your router, such as the Belkin Wifi phone, is best. And for the ultimate flexibility, you should go for one that incorporates a Dect phone, such as the Philips 841, so you can make and receive calls over your regular landline from the same handset.

If you only plan on using Skype occasionally, say for international business calls, a USB phone connected to your Mac, like the Ipevo Free.1 is fine and considerably less expensive than a wifi phone. The other option is to go for a headphone and mic headset. The advantages of this setup are, of course, that you don't have to pick up a handset and hold it to your ear to make or receive a call. The disadvantage is that if you don't wear the headset all the time, putting it on and taking it off is more hassle than using a handset.

The most recent addition to the methods for making Skype calls is using a mobile phone. Mobile phone network 3 launched a phone last year that operates as a regular pay-as-you-go or contract mobile phone, but also runs Skype. Skype calls are made over 3's data network and calls to other Skype users are free, subject to a minimum £10 per month top-up on the pay-as-you-go version.



Belkin Wifi phone package

Price £99 (£84.26 ex VAT) from skype.com
Contact Belkin + belkin.com

Belkin's Wifi phone is a Skype compatible handset that looks like a mobile phone and connects to your ADSL Internet connection using either the 802.11g router that comes with the package version of the phone, or your own router if you go for the handset on its own. The phone has full support for Skype, including SkypeIn and SkypeOut, and will work with routers that use Wep, or WPA encryption. It's not compatible with routers that need browser-based authentication, though. The handset will last for three hours talktime or 30 hours on standby between charges. The buttons are smaller than the other handsets here, making it more difficult to dial numbers and navigate menus.



Ipevo Free.1

Price £17.95 (£15.28 ex VAT) from expansys.com
Contact Ipevo + ipevo.com

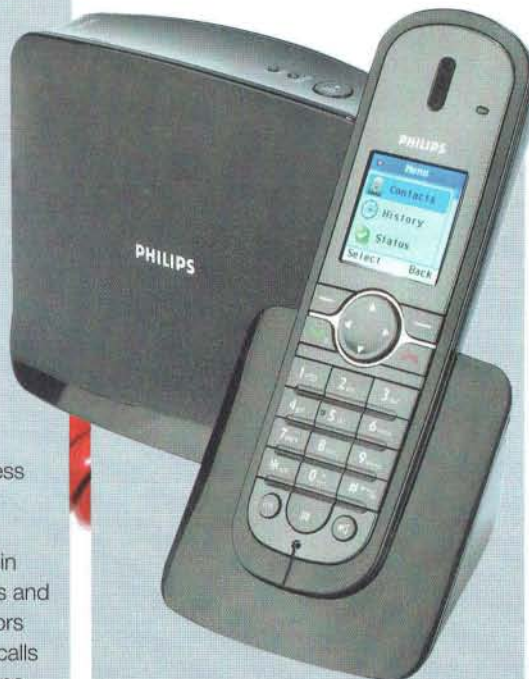
Ipevo's Free.1 was one of the first Skype-compatible phones to be released for the Mac. Although launched two years ago, you can still buy one online for less than £20. It connects to your Mac over USB and needs a driver application to run. As we said in our review (see *MacUser*, 26 May 2006, p37) that's not ideal, but the phone itself works very well. There's a mode switch to cycle through Skype's command panes, a rocker to move up and down your contacts list, and volume control. There's also a numeric keypad to enter numbers manually. The Free.1 is cheaper than dedicated VoIP phones, but obviously needs to be tethered to your Mac. It's probably a matter of personal preference whether you are better with this or a headset.



Linksys Wireless-G Skype Phone

Price £91.29 (£77.69 ex VAT) from amazon.co.uk
Contact Linksys + linksys.com

The Wireless-G Skype Phone is Linksys' version of the Belkin Wifi phone. It sports the same Skype features and connects to your wireless router. This model doesn't come with a router, making it expensive in comparison with the Belkin. The 1.8in screen displays your Skype contacts and call history, as well as status indicators for battery life, signal strength, new calls and handset lock. It stores your Skype log-in details and logs into your account to enable you to make and receive calls. Given that this phone is so expensive, there's no real reason to consider it over the alternatives, including Belkin's Wifi phone, which can be bought for about £80 if you shop around.



Philips 841

Price £99 (£84.26 ex VAT) from skype.com
Contact Philips + philips.co.uk

The Philips 841 is a cordless Dect phone, which doubles as a Skype-compatible VoIP phone. It connects to your phone line and router/modem by means of a base station, and allows you to make regular landline calls or Skype calls. Its sleek black case incorporates a colour LCD that displays your Skype contacts and call log, as well as those for your regular landline. Skype contacts can be downloaded from your Skype account to the handset and vice versa. The handset will last for 120 hours on standby or 12 hours in use before it needs re-charging. There's a speakerphone and headset jack, and the 841 can support up to four handsets. Another three bases can also be added, making a total of 16 handsets.



3 Skypephone

Price £39.99 (£34.03 ex VAT)
Contact 3 + three.co.uk

The Skypephone is a pay-as-you-go 3G mobile phone from 3, which has built-in Skype features. You can make free Skype-to-Skype calls and instant messages, subject to a minimum £10 per month top-up, and it stores your Skype contacts and call logs. The free calls only apply in the UK or while roaming on a 3 sister network, and they're subject to a 4000-minute fair usage policy. The phone itself has a two-megapixel camera and MP3 player. Non-Skype calls are charged at 12p per minute to landlines or mobile phones at any time, while texts are 12p each. The Skypephone is also available on contract from £15 per month, though if you plan on using it mainly for Skype calls, the pay-as-you-go option is better value.

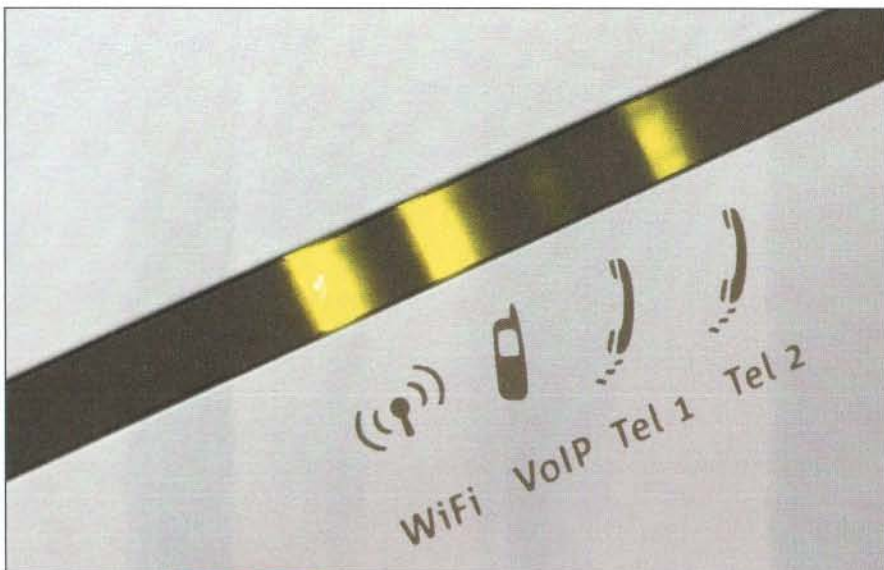
Session Initiation Protocol (SIP)

Skype isn't the only service available for making and receiving voice calls over IP. BT, for example, offers what it calls a Hub Phone with some broadband packages. This connects to your BT router wirelessly and lets you make and receive VoIP calls. Vonage also offers VoIP over a regular landline.

A number of service providers offer services based on Session Initiation Protocol (SIP), a signalling protocol that's used for setting up multimedia communications sessions. Although this can be used in the transmission of a variety of media, it's currently best-known as a means of providing VoIP telephony services.

Two well-known providers in the UK are Sipgate and VoIPtalk. Both operate over a regular landline and offer free calls within their respective networks. Sipgate also provides free calls to partner networks in other countries, whereas VoIPtalk includes free international calls to some countries on a number of its call plans. In both cases, calls to international numbers that are not free cost significantly less than a call from a regular landline. For example, calls to the US from a Sipgate phone are 1.5p per minute and from VoIPtalk just 1.4p per minute.

SIP providers are keen to point out the quality of voice calls made over their networks, perhaps because in its early days, VoIP telephony had a reputation for poor audio quality. Providers describe calls on their network as being 'ISDN quality' and Sipgate says: 'In tests conducted by trade magazines, the technology provided by Sipgate in particular was even rated as



superior to the fixed-line network.'

To make voice calls using a SIP provider, you need either a regular phone connected to a VoIP adaptor or an IP telephone. Adaptors come in two forms: one which plugs into a router and another which is built into a router. Both Sipgate and VoIPtalk also have 'softphones' – Skype-like applications that run on a computer and through which you can make calls using a headset or compatible phone. Sipgate's X-Lite softphone is a widely used model that's compatible with Mac OS X 10.4 and 10.5, whereas VoIPtalk's easySpeak is Windows-only.

SIP telephony services allow you to make calls to any phone in the world and can be used from any broadband Internet access connection. Most services also provide itemised call details, an address book facility and voicemail.

Choosing a SIP provider is a complicated business. Each has a different set of tariffs and call charges for landline, mobile and international calls. If you plan on using your SIP phone regularly, it may be worth opting for a subscription package. These cost from about £5.99 per month and, depending on the provider and service you choose, entitle you to free calls to UK landlines at certain times or 24/7. You may also be able to make free international calls to some countries.

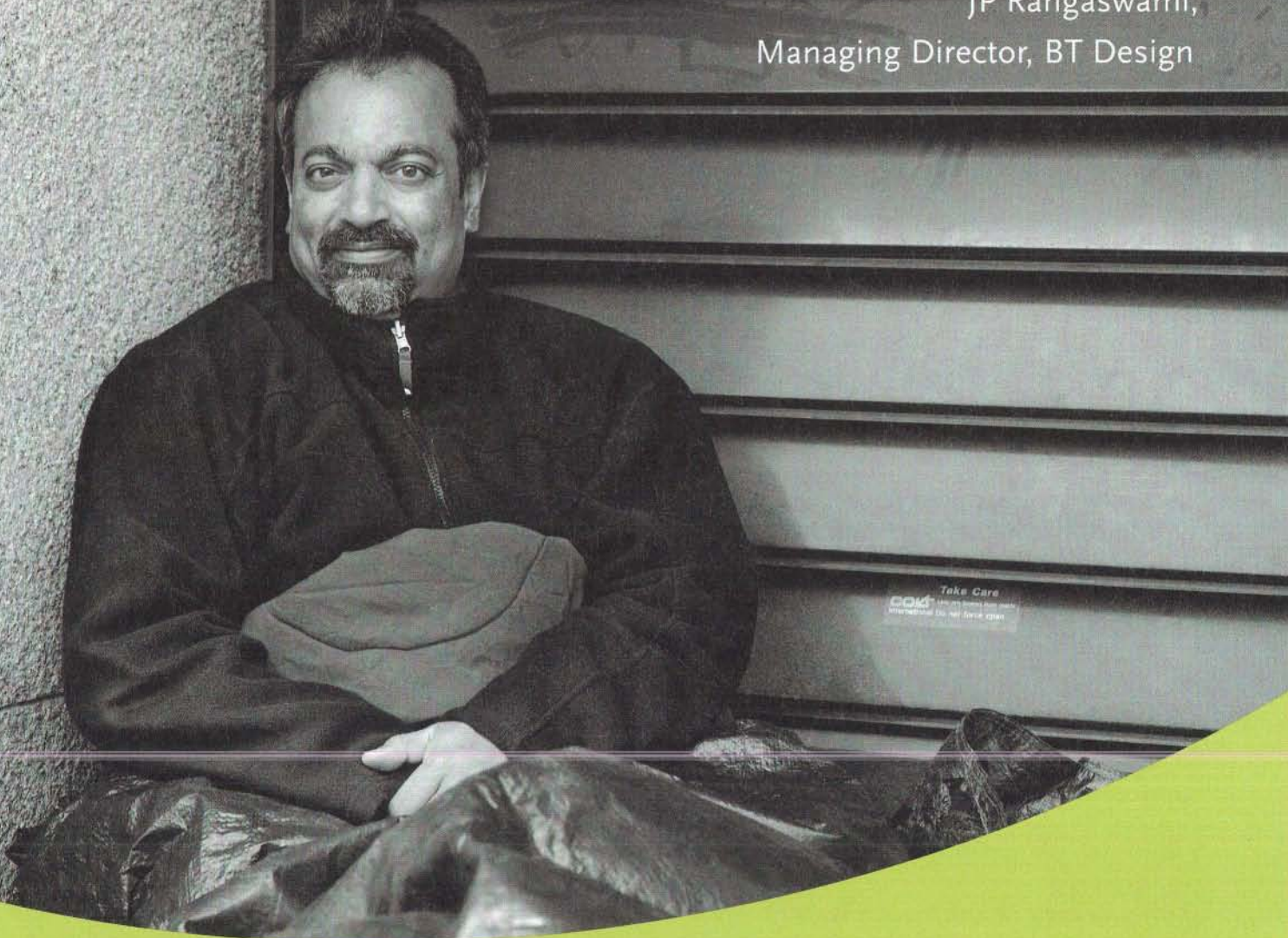
Thankfully, choosing the equipment is less complicated. If you already have a router, you'll probably want either a VoIP adaptor for an existing phone or a dedicated IP phone. If you need to buy a wireless router, you should consider one with SIP-compatible phone ports on it. This will allow you to plug any phone into your router and use it for SIP calls. Some SIP operators, including Sipgate, will set up your phone, adaptor, or router for you, complete with your telephone number, so that all you have to do is plug it in and start making calls.

► Sipgate can take the hassle out of SIP by setting up your phone, adaptor and router for you.



'This time last year I was sleeping rough.
Now I'm ready to do it all again.'

JP Rangaswami,
Managing Director, BT Design



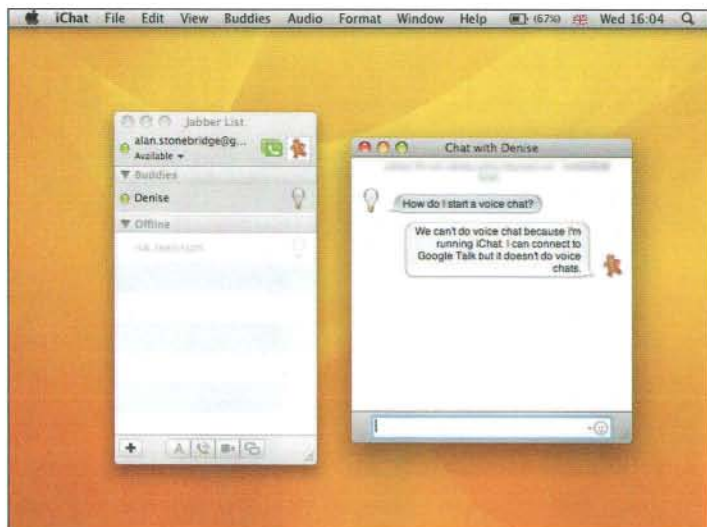
It could be the worst night's sleep you've ever had but it will be worth it. Celebrating its 10th anniversary, Byte Night is the IT industry's annual sleep-out in aid of young homeless people. Be part of it. Join 250 other IT executives to help raise vital funds for NCH, the children's charity and you could give thousands of young people new hope.

Byte Night 2008 takes place on **Friday 3rd October** at Potters Fields, London. If you can't make the London event, get involved closer to home with our Byte Night regional events. To find out more or make a donation, visit www.bytenight.org.uk or email barbara.gill@nch.org.uk



the children's charity

• Alternatives to VoIP



◀ iChat under Tiger and Leopard can connect to Google Talk contacts, but the Windows version of Google Talk won't send audio to it.

iChat

When Apple introduced iChat, it chose to pair it with the AOL network, so if you don't have a .Mac account, just sign up for a free Aim account at aim.com. It also integrates with the built-in iSight camera and microphone on MacBooks and iMacs. You'll need additional software to chat to those on Microsoft's network, though.

If you're feeling lazy, you could get your Windows counterparts to install AOL Instant Messenger (Aim). It can send text, audio and video to iChat.

It's not feasible to ask a long list of contacts to install Aim, though. It's often impossible in a corporate environment anyway. In this case, you'll have to look at one of the other clients to get full audio and video conferencing with Windows users.

Google Talk

Google Talk is built on open-source technology called Jabber, but the official Desktop application only runs on Windows. iChat under Tiger can be configured to use Google Chat (tinyurl.com/38bdtm) and it's even easier under Leopard.

Google Talk comes to a grinding halt when trying to send audio, though. All that Windows users can do is leave voicemail, which sends their voice as an email attachment.

The web-based gadget includes a call button, but it remains greyed out. You can rule out Talk for VoIP unless Google releases an official client, or Apple and Google come to an arrangement that allows iChat to talk to the Windows side properly. Look elsewhere, in the meantime.

Asterisk

Asterisk (asterisk.org) is an open-source telephony solution that's released under the GNU GPL. It uses its own protocol, inter-Asterisk exchange (IAX), to establish VoIP connections between servers and it's able to work across traditional telephony systems, too.

While it's not as simple to configure as entering an account name and password into an instant messenger, this private branch exchange (PBX) can feasibly be deployed in the home or by small businesses, and various companies have used it as the basis of their own products, some easier to configure than others. Several versions specifically built for Mac OS X are available, including the ones at mezzo.net/asterisk and sunrisetel.net.

One major advantage of following this route is the protection it affords against the downtime of services that are open to the public, such as Windows Live and Aim. It's frustrating enough for home users to find out that a chat service is out of action, never mind being unable to make important business calls, and employing Asterisk leaves you less dependent on inaccessible servers, thus giving you greater control over the connection to the outside world.

Microsoft Messenger 7

Although Microsoft recently updated its Messenger client, the long-awaited audio and video chat features remain off-limits to most Mac users. They're only available to those in a corporate environment, with Office Communications Server 2007 for the time being.

They'll hit the Mac eventually – see the Mactopia blog entries at tinyurl.com/28ngcs and tinyurl.com/5tu8sq – but they're delayed until Windows Live Messenger 9 comes out of beta. As soon as that happens, keep an eye open for an updated Mac client that'll unlock the feature that Windows users have enjoyed for years.

In the meantime, Intel Mac owners who are unable to persuade contacts to install Aim or other software can run Windows and Live Messenger 8.5. It's a pricey solution if you have no other reason to run Windows



XP or Vista but, short of picking up the tab for costly long-distance phone calls, it may be your only option for talking to business contacts who are unable to install software.

Installing under Boot Camp is good enough for personal conversations that demand full attention, but this sort of application is just the sort that Parallels Desktop's Coherence and VMware Fusion's Unity modes were intended for. They allow Live Messenger to apparently co-exist on the Mac Desktop alongside native applications. It'll require plenty of Ram to maintain performance, though.

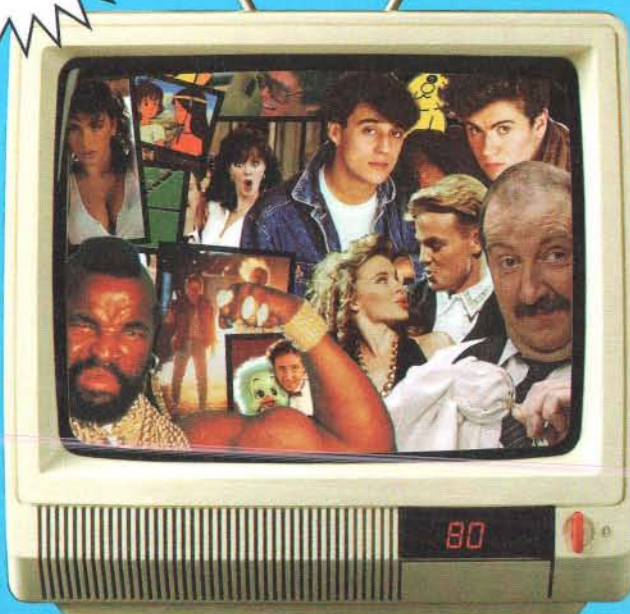
◀ On the surface, not much has changed, but soon Mac and Windows users will be able to see and hear each other. ➤

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I LOVE
BROS

How much it costs Worldwide call charges

Here are the charges of three main VoIP providers compared with BT's Unlimited Weekend plan for calls from the UK to landlines. Prices are in pence per minute, unless otherwise stated.

Canada

Skype 1.4p/min
Sipgate 1.5p/min
Vonage 2p/min
BT 18.5p/min

Cuba

Skype 66.9p/min
Sipgate 86.7p/min
Vonage 98p/min
BT £1.31/min

Brazil

Skype 3.6p/min
Sipgate 4.5p/min
Vonage 4p/min
BT 95.5p/min

Poland

Skype 1.4p/min
Sipgate 2.4p/min
Vonage 2p/min
BT 31p/min

Prices to specific areas in some countries may vary from the quoted amounts. **Skype** rates from tinyurl.com/4t7yvc. **Sipgate** rates from tinyurl.com/3sv7js. **Vonage** rates from tinyurl.com/4pbdbk. **BT** rates from tinyurl.com/2aloyd for direct dialled calls from a residential line, during daytime on weekdays. BT's International Saver and International Freedom add-ons offer savings at an additional monthly rate.

USA

Skype 1.4p/min
Sipgate 1.5p/min
Vonage 2p/min
BT 17.5p/min

Ghana

Skype 10p/min
Sipgate 9.7p/min
Vonage 9p/min
BT 95.5p/min

Argentina

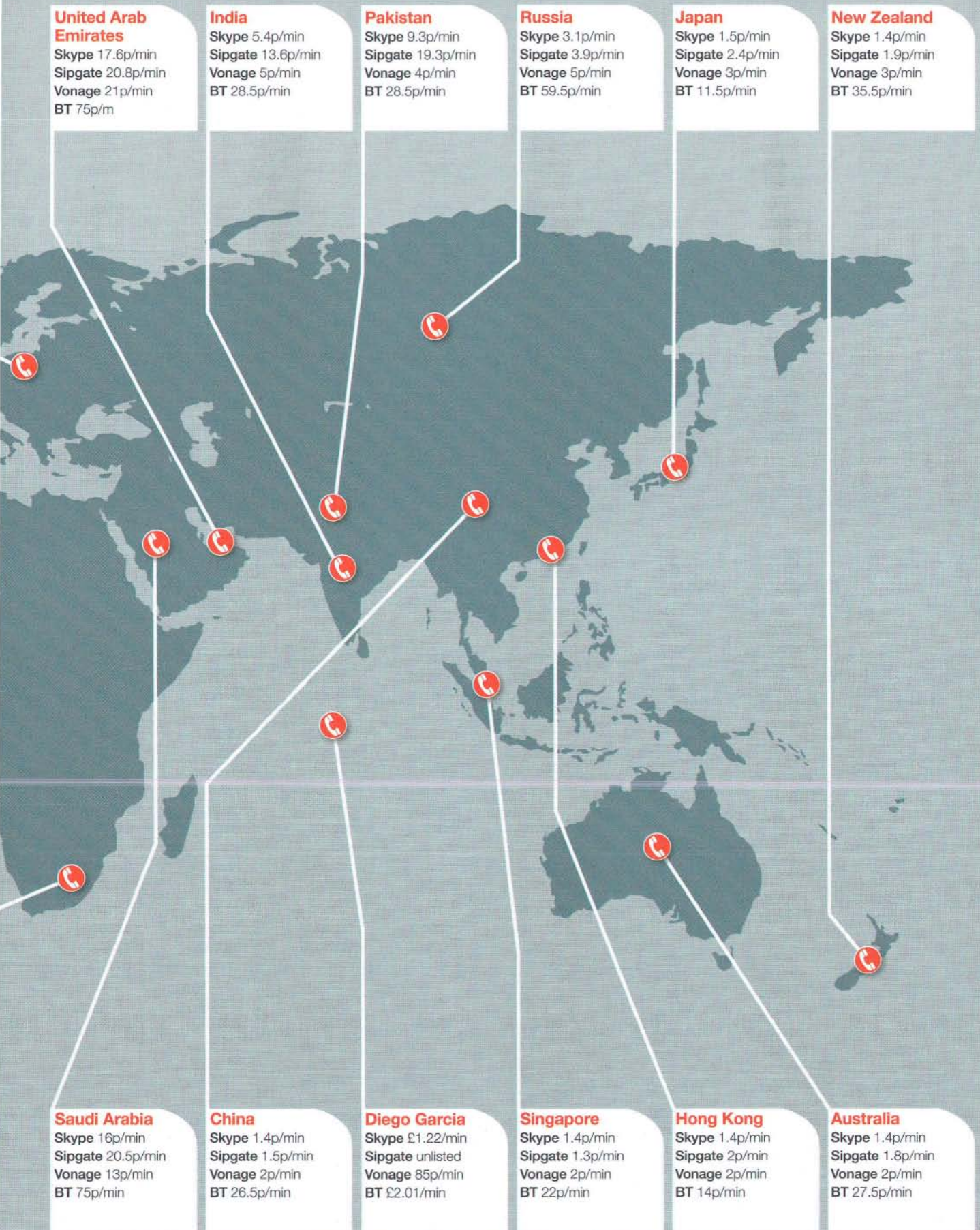
Skype 2.1p/min
Sipgate 3.1p/min
Vonage 2p/min
BT 95.5p/min

Falkland Islands

Skype 44.4p/min
Sipgate 50.2p/min
Vonage 67p/m
BT 99p/min

South Africa

Skype 4.5p/min
Sipgate 4.9p/min
Vonage 6p/min
BT 59.5p/min



CSS

MADE SIMPLE

In the first part of our series on Cascading Style Sheets, we explain how CSS can be used to improve the layout of your web pages and make them a lot more user-friendly

Words Nik Rawlinson

Image Andy Potts (andy-potts.com)

If you design websites and you aren't using Cascading Style Sheets, then there's something wrong. And that something is you.

The days of mixing content and style are long gone, and you should no longer be using embedded font tags, table cells or extensive lines of repetitive styling code in your web pages. Instead, you can hive off your style information into a separate file that can be called in by any page on your site. This will make your pages easier to understand, as they'll only contain the structure and content, ensure greater consistency throughout your site and visitors will consume less bandwidth in downloading them.

Over the next six pages, we will introduce you to the fundamentals of using style sheets to format the layout of a table and the look of the data it contains. Once you have learnt the basics, you can apply these principles to any other element on your site.

The result will allow greater flexibility, as compliant code can be recycled on other sites or, with a little bit of tweaking to a single file, used as the basis of a



FIGURE 1

```
<head>
<meta http-equiv="Content-Type" content="text/html;
charset=UTF-8" />
<title>Test document</title>
<link href="macuser.css" rel="stylesheet" type="text/css">
</head>

<body>

[code here]

</body>
</html>
```

FIGURE 2

```
<table class="results">
<tr>
<th>Year</th>
<th>Sales</th>
</tr>
<tr>
<td>2007</td>
<td>1.3m</td>
</tr>
<tr>
<td>2008</td>
<td>1.7m</td>
</tr>
<tr>
<td>2009</td>
<td>2.1m</td>
</tr>
</table>
```

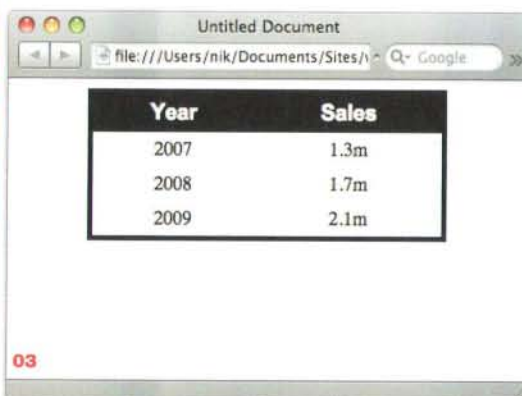
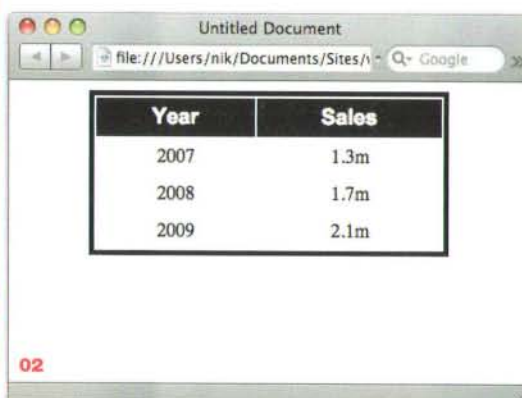
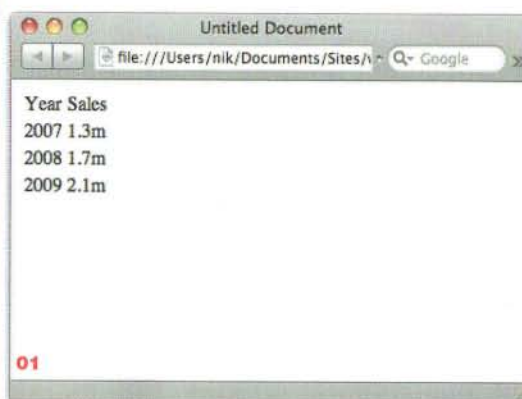
FIGURE 3

```
.results {
width: 300px;
margin-right: auto;
margin-left: auto;
text-align: center;
border: 4px solid #000000;
border-collapse: collapse;
}
```

completely different design that can be rolled out with far less effort than ever before.

In the following examples, we will assume that all structural code – such as tables – is contained on a page to which an external style sheet has been attached. Use the code in Figure 1 (above) as the basis of your page, replacing [code here] with the code used in each section. The style sheet will be called macuser.css.

Note that to follow this feature, you only need use TextEdit, although a dedicated coding tool, such as the free TextWrangler (barebones.com/products/



textwrangler), may be more appropriate.

THE BASICS

The code in Figure 2 (left) creates a simple table showing sales figures for three years – 2007 to a projected 2009. While it works, it's far from inspiring, as you can see in screen 1 (left). Use it on the replacement for [code here] and you'll see that while it works, nobody will enjoy reading it. A bit of simple CSS can go a long way to making it much more engaging.

At the moment, the cell sizes are determined by the length of the content in each one, which makes the years and results tough to differentiate. This can be sorted out by specifying an overall size for the table by defining the dimensions of the 'results' class tag. This is the variable in the 'class' tag applied to the table's opening tag. If you did not specify that the table took the styling applied to 'results', then any styling you applied to this specific table would also apply to every other table on a page that uses the same style sheet, which could be the whole

of your site. The result would be a less flexible site.

Create a file called macuser.css and save it in the same folder as the web page containing your table. Enter the code in Figure 3 (left). This tells the browser to create a table that is 300 pixels wide, to centre the text and to surround it with a solid black border four pixels in width. The six zeroes represent black in hexadecimal code – at the other end of the scale, six 'f's represent white, as you'll see in a moment. The 'auto' variables beside margin-right and margin-left float the table in the centre of the page.

The border-collapse variable may look like it overrules the four-pixel border surrounding the table, but it doesn't. What it actually does is remove the gaps between the cells, so that you can apply background colours to those cells without seeing a gap between them. We'll show you what difference this makes later on.

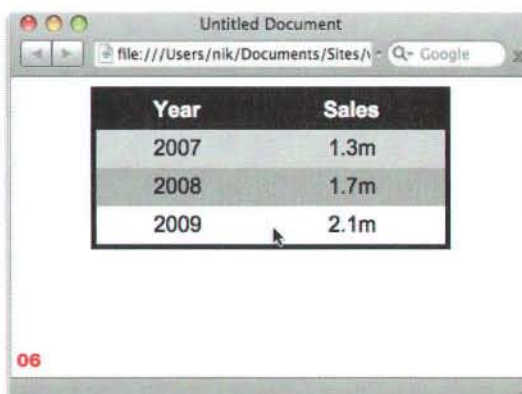
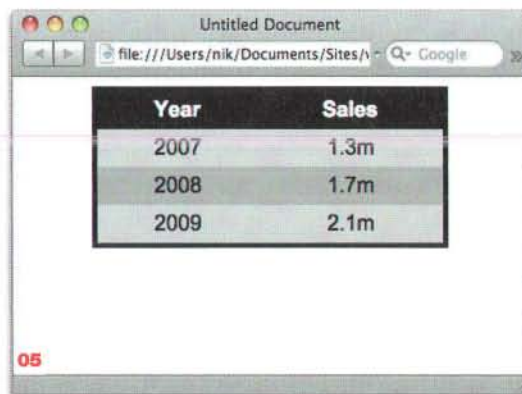
Now let's look at the content. You'll have noticed that we defined two table cells as header cells – they use the tags `th` rather than `td`. This allows us to style them up differently to the other cells in the table. Add the lines in Figure 4 (right) to the style sheet, just below the code shown in Figure 3 (left).

This code styles both the layout (the cell in which the text is positioned) and the text itself. As such, it makes the text larger, bolder and white, and renders it in Arial, Helvetica or sans-serif, depending on which font is available on the visitor's computer. Meanwhile, it makes the actual cell background black and applies five pixels of padding to loosen things up a little. Taking away the border-collapse line from the `.results` section will break the black background, as you can see from screens 2 and 3 (left). With uncollapsed borders, you can see the white page background peeping through.

Now we can start work on styling up the data in the table. The same principles apply here as they did for the header cells, although these cells are defined using the tag `td` rather than `th`. This lets us define a new style that will only apply to cells that contain data rather than headings. As we'll show later on, we can further refine our cells by assigning them specific classes rather than defining all data cells in the same way.

We'll borrow some attributes from our header cells for the sake of consistency, but in other respects define a bespoke style using the code in Figure 5 (right), which should be added to `macuser.css` below the code in Figure 4 (right).

By now, you can probably work out that this gives 18-pixel sans-serif text, in whichever font on the list the viewer's computer has installed, and a five-pixel breathing space in all directions. Unlike the header data cells we have not applied any formatting to the cells themselves, only the data they contain. The results are shown in screen 4 (below).



WHY CASCADING?

Our table is already looking a lot smarter, but imagine if it was far longer than the example here. It would be very easy to lose track of which sales figure was achieved in each year. That's why most tables have guidelines or alternating background colours. With the basic structure of our table already in place, we can do the same with our small table here, by alternately styling up our data rows.

Return to the original code that defined the table and make the amendments shown in Figure 6 (below) to the last three `<tr>` tags. As you can see from the code, we are alternating between two different styles for the rows below the header row by attaching a specific class to them named `rowstyle1` and `rowstyle2`.

Cascading Style Sheets work in an additive way, with each subsequent instruction adding to what is already in place. Or, to put it another way,

FIGURE 4

```
th {
  font-family: Arial, Helvetica, sans-serif;
  font-size: 18px;
  font-weight: bold;
  color: #ffffff;
  background-color: #000000;
  padding: 5px;
}
```

FIGURE 5

```
td {
  font-family: Arial, Helvetica, sans-serif;
  font-size: 18px;
  padding: 5px;
}
```

FIGURE 6

```
<table class="results">
  <tr>
    <th>Year</th>
    <th>Sales</th>
  </tr>
  <tr class="rowstyle1">
    <td>2007</td>
    <td>1.3m</td>
  </tr>
  <tr class="rowstyle2">
    <td>2008</td>
    <td>1.7m</td>
  </tr>
  <tr class="rowstyle1">
    <td>2009</td>
    <td>2.1m</td>
  </tr>
</table>
```


FIGURE 7

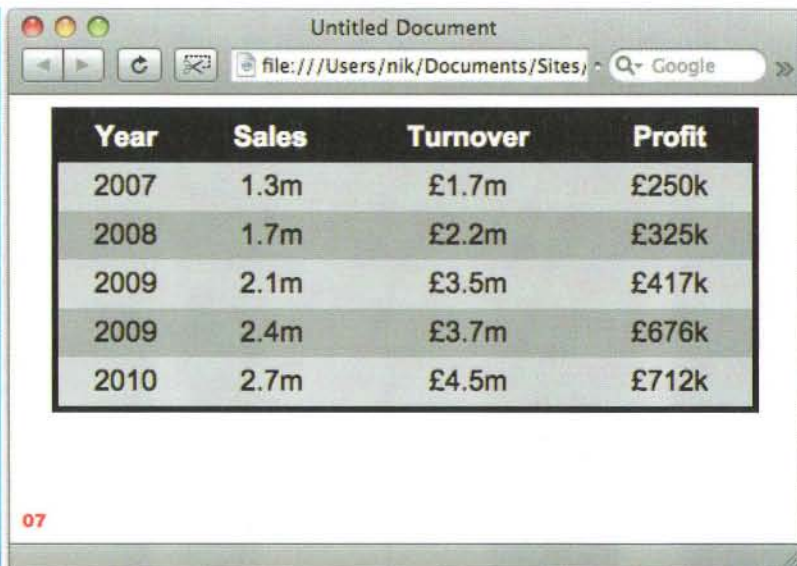
```
.rowstyle1 {  
    background-color: #cccccc;  
}  
.rowstyle2 {  
    background-color: #999999;  
}
```

FIGURE 8

```
.rowstyle1:hover {  
    background-color: #ffffff;  
}  
.rowstyle2:hover {  
    background-color: #ffffff;  
}
```

FIGURE 9

```
<table class="results">  
  <tr>  
    <th>Year</th>  
    <th>Sales</th>  
    <th>Turnover</th>  
    <th>Profit</th>  
  </tr>  
  <tr class="rowstyle1">  
    <td>2007</td>  
    <td>1.3m</td>  
    <td>£1.7m</td>  
    <td>£250k</td>  
  </tr>  
  <tr class="rowstyle2">  
    <td>2008</td>  
    <td>1.7m</td>  
    <td>£2.2m</td>  
    <td>£325k</td>  
  </tr>  
  <tr class="rowstyle1">  
    <td>2009</td>  
    <td>2.1m</td>  
    <td>£3.5m</td>  
    <td>£417k</td>  
  </tr>  
  <tr class="rowstyle2">  
    <td>2008</td>  
    <td>1.7m</td>  
    <td>£3.7m</td>  
    <td>£676k</td>  
  </tr>  
  <tr class="rowstyle1">  
    <td>2009</td>  
    <td>2.1m</td>  
    <td>£4.5m</td>  
    <td>£712m</td>  
  </tr>  
</table>
```



Year	Sales	Turnover	Profit
2007	1.3m	£1.7m	£250k
2008	1.7m	£2.2m	£325k
2009	2.1m	£3.5m	£417k
2009	2.4m	£3.7m	£676k
2010	2.7m	£4.5m	£712k

the styles cascade, so that one can feed into another. Imagine a garden water feature with water flowing from one small bowl through a series of ever-growing receptacles until it reaches a pond. Each small receptacle adds something to the overall effect until it achieves the ultimate purpose: filling the pond. In the same way, each tag and class adds to the overall look of the content until the ultimate goal – populating your page – is reached.

In our example, we have now set up three cascading styles: those for the table as a whole; for the individual cells it contains and, now, for the rows that gather those cells together.

We will now create two row styles that will add their content to the styling already applied to the data cells without ruining the text formatting that we have applied to them, as shown in Figure 7 (left). Notice how the class names, rowstyle1 and rowstyle2 have been preceded by a dot. This indicates that they are a class rather than a layer, which would be preceded by a # or an existing tag such as paragraph (p) or link (a), and which would have no leading character.

The styling we have applied is very simple, and only colours up the cells in two shades of grey – one slightly lighter, represented by the hexadecimal code cccccc, and one slightly darker, represented by 999999. When you preview your page (see screen 5 on page 65), you'll see that the lighter tone has been applied to the first and third lines of data, despite us only defining it once in the stylesheet. This is because the class to which it relates – rowstyle1 – has been used as a variable on those two rows.

CONDITIONAL FORMATTING

Styles can be made dynamic, so that they only apply when the user interacts with them by, for example, rolling the mouse over the item to which they are applied. This is commonly used to change the styling of a hyperlink when the mouse hovers above it prior to clicking, but it can just as easily be used to change the styling of any item on the page

by appending the clause `:hover` to the end of the classes defining the styles.

Let's apply this theory to the table by giving the data rows alternate states that will only show when the mouse is above them, using the code in Figure 8 (left). This code tells the browser to change the background colour of all the cells in the row to white when the mouse is positioned anywhere in the cell, as shown in screen 6 (page 65). Rolling the mouse up and down the table will change the position of the white row, which would allow us to use it as a pointer to help keep our place in a long series of data we were having trouble matching up along the whole line.

REAL FAST REFORMATTING

The benefit of working with CSS rather than embedding your content and styling in the same document is that you can quickly repurpose either your content or your styles without touching the other. To prove this, we'll quickly integrate new data into our table, which will pick up the styling already applied to what is in place.

Use the listing in Figure 9 (left) to replace the table you have been working with, and then preview it in your browser. If you preview the table in your browser, you'll notice that without us applying any specific formatting in the content file, the new rows in the table have taken up the styles that we had already defined for the first three rows of the table. Moreover, the whited-out hover state that we applied also applies to the new rows. However, it's starting to get very cramped. Early on when designing the layout, we specified a maximum width of 300 pixels, which is fine for a table of just two columns, but hopelessly inadequate when we double that to four.

As our styling and content are managed separately, we will fix this by returning to the `macuser.css` file and changing the line width: 300px; in the `.results` section to 450 (see screen 7 left). From here, you can see how making small changes to this file can introduce radical changes to the content file, which we will do by changing the font and colour

FIGURE 10

```
.results {
    width: 450px;
    margin-right: auto;
    margin-left: auto;
    text-align: center;
    border-collapse: collapse;
}
th {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 16px;
    padding: 3px;
    border-bottom: 4px solid #000000;
}
td {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 16px;
    padding: 3px;
    border-bottom: 1px dotted #000000;
}
.rowstyle1 {
    background-color: #FFCCFF;
}
.rowstyle2 {
    background-color: #FFCCFF;
}
.rowstyle1:hover {
    background-color: #FFFFFF;
}
.rowstyle2:hover {
    background-color: #FFFFFF;
}
.toprow {
    background-color: red;
}
```

definitions to match the demands of a client's house style. We'll do this by changing five sections of our `macuser.css` file, each of which will feed into the main content document when we preview it in a browser. Figure 10 (above) shows the new `macuser.css` file.

The changes we have made are minimal, but the effect on the document to which the style sheet is attached is profound – see screen 8, left. We have changed the background colours of the rows to two different shades of orange, removed much of the formatting for the header cells, returning them to a white background, and removed the heavy border surrounding the whole table. We have introduced a discreet dotted divider between the data lines, and maintained the white line hover-over effect.

What this shows is that by separating the content and the styling of our document, you can apply the style sheet to multiple pages on your site and they will all inherit its properties. More important than that, responsibility for the site can be split between different authors, according to their areas of expertise, with content managers working on the meat of the page and designers simultaneously working on the styling, without either interrupting the other.

In the next issue, we'll look at how CSS can be used to control layouts across a whole page.

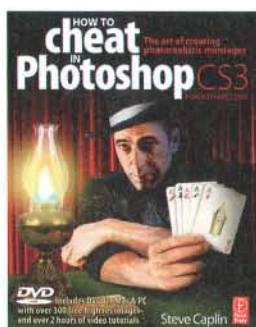


Year	Sales	Turnover	Profit
2007	1.3m	£1.7m	£250k
2008	1.7m	£2.2m	£325k
2009	2.1m	£3.5m	£417k
2009	2.4m	£3.7m	£676k
2010	2.7m	£4.5m	£712k

STEVE CAPLIN'S **A** TO **Z** OF DESIGN

L: Light and shade

Steve Caplin walks us alphabetically through the concepts essential to success for any jobbing or aspiring designer.



ABOUT THE AUTHOR

Steve Caplin is a designer and illustrator working for a range of national newspapers. His best-selling *How to Cheat in Photoshop*, now in its fourth edition, is published by Focal Press. <http://books.macuser.co.uk/caplin>

There are two main tricks to creating realistic montages in Photoshop – making sure the lighting in the scene comes from a consistent direction, and placing shadows behind and beneath any objects in the scene. If you don't pay attention to these details, the picture will feel wrong to even the least visually literate viewer.

Before adding lighting and shadows, you first need to balance photographic elements that already have a definite lighting direction. Some images from photo libraries are strongly lit from the side, making them hard to use unless you remove the shadows to produce a neutral image. The best tool to do this is the Shadows/Highlights adjustment, found under Photoshop's Image > Adjustments menu.



In its basic mode, there are just two sliders: one for Shadows and another for Highlights. Firstly, drag the Shadows slider to bring more light into deeply shaded areas, then drag the Highlights slider to reduce over-bright regions of the photograph. Clicking the 'Show More Options' box at the bottom of the dialog will offer finer control over the process. As our example shows, the adjustment is capable of neutralising even a strong shadow to produce a well balanced image.

There are some cases when you may want to portray a light source within your image. One method of achieving this is to draw a white or yellow glow emanating from the object in question. While this is a reasonable approach and can produce dramatic results, it rarely looks realistic.

A more convincing solution is to add a shadow outside the affected area, darkening the area that isn't lit rather than brightening the area that is. The easiest way to do this is first to add a new Adjustment Layer to darken the whole scene. Use either Curves or Levels, whichever is your favourite method. You can then make use of the fact that all Adjustment Layers come with built-in masks, which can be painted on to hide the effect of the adjustment.

If you want to produce a directional light, use the Pen or Lasso tools to trace straight lines that define the shape of the light cone – hold the Alt key with the Lasso tool to draw straight lines between click points. Use Select > Modify > Feather to add softness to the edges of the selection, then fill this region with black on the Adjustment Layer's mask. This will hide the effect, limiting the shadow to just the region outside the selected area.

It can also help to add some colour to the lit area, using another Adjustment Layer.



▲ 01: A strongly side-lit portrait from a photo library can look unnatural, so you need to balance this image.



▲ 02/02a: Opening the Shadows/Highlights adjustment and increasing the Shadows level will boost dark regions.



▲ 05: This bright shot of an interior can be improved by bringing some light through that window.



▲ 06: Make a new Curves Adjustment Layer, and drag down on the curve to darken the whole scene.



▲ 07: Paint or select areas of the Adjustment Layer's mask to hide the effect in those regions.

A touch of yellow will simulate incandescent light convincingly. By making the layer mask the precise inverse of that on the shadow Adjustment Layer, you can ensure that the colour only affects those areas not in shadow. To do this, hold the Command key and click on the Shadow Adjustment Layer's mask in the Layers palette, which will load the white (unmasked) area as a selection. Switch to the mask for the colour layer, and fill this area with black to produce an inverse.

You can add shadows to individual objects either on the object itself or behind it (on the floor or wall). There are two methods for adding a shadow directly to the object. First of all, you can create a new layer, using the object as a Clipping Mask

(press Alt-Command-G after creating the new layer), so that you can paint the shadows here. This allows you to easily erase the shadows later.

An alternative approach is to create an Adjustment Layer, again using the object as a Clipping Mask, and darken the object here. Then, because the Adjustment Layer has a mask associated with it by default, you can paint on this mask the areas where you don't want the shadow to show up. This can be a preferable method, as it produces more realistic shading than simply painting in black on a new layer. It's directly comparable to the method for showing light glows, detailed above.

The simplest way to create a shadow behind an object is to duplicate the object, fill it with black, and then soften the edges using Gaussian Blur. By lowering the opacity and dragging the shadow to an appropriate location, you can create very convincing shadows. If the ground is visible, the shadow will need to be broken to bend across the floor to meet its base.

Most shadows on the floor, however, need to be painted by hand onto a new

layer. Since floor shadows rarely follow the shape of the object that casts them, it's largely a matter of guesswork and intuition. Use a soft-edged brush, set to a low opacity, and build up the shadow in stages. The tendency is always to make shadows that are too strong this way; so when you've finished painting, try reducing the opacity of the entire layer for a more pleasing result.



▲ 03/03a: Raising the Highlights amount darkens the brighter side of the face, bringing the two together.



▲ 04: You will now be able to use Curves to brighten the whole of the image.



▲ 08: This football looks as if it's floating above the surface, and hardly fits into the scene.



▲ 09: Adding shading to the ball gives it lighting that matches the shadow direction of the rest of the scene.



▲ 10: Painting a shadow beneath the ball places it firmly on the table, and it now matches the background.

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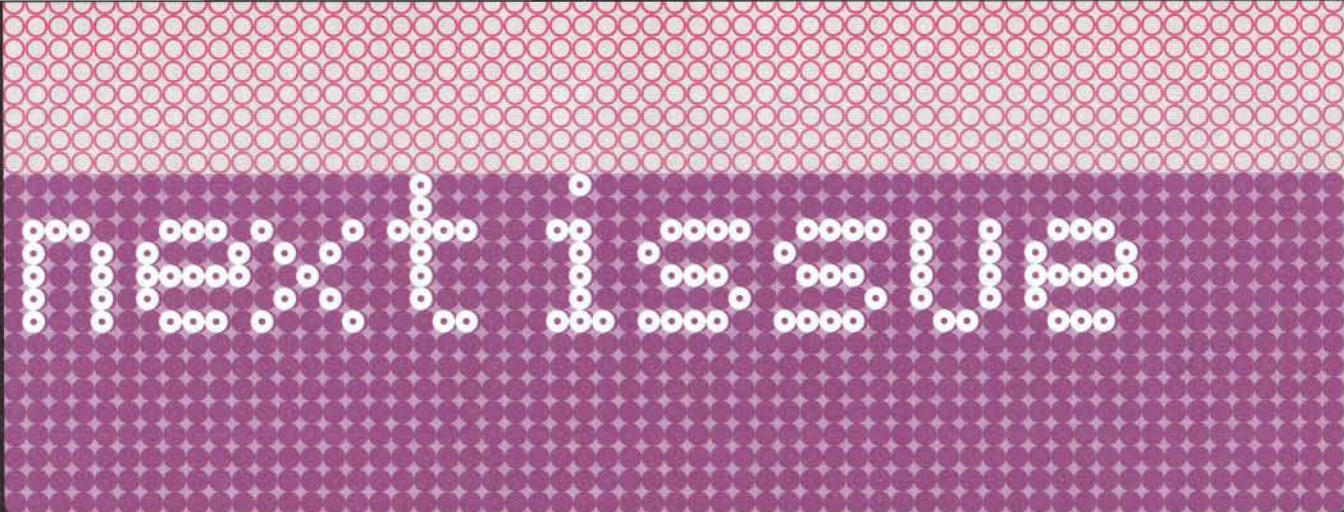
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Phone

IPHONE 3G

We all saw it coming, but that made it no less an exciting piece of news. What are we talking about? The iPhone 3G, of course. In the next issue we'll bring you the full low-down on this remarkable device, explore its full specs and explain just what it means for new or wannabe iPhone users here in the UK.

SNOW LEOPARD

Details may be available primarily to developers right now, but in the next issue

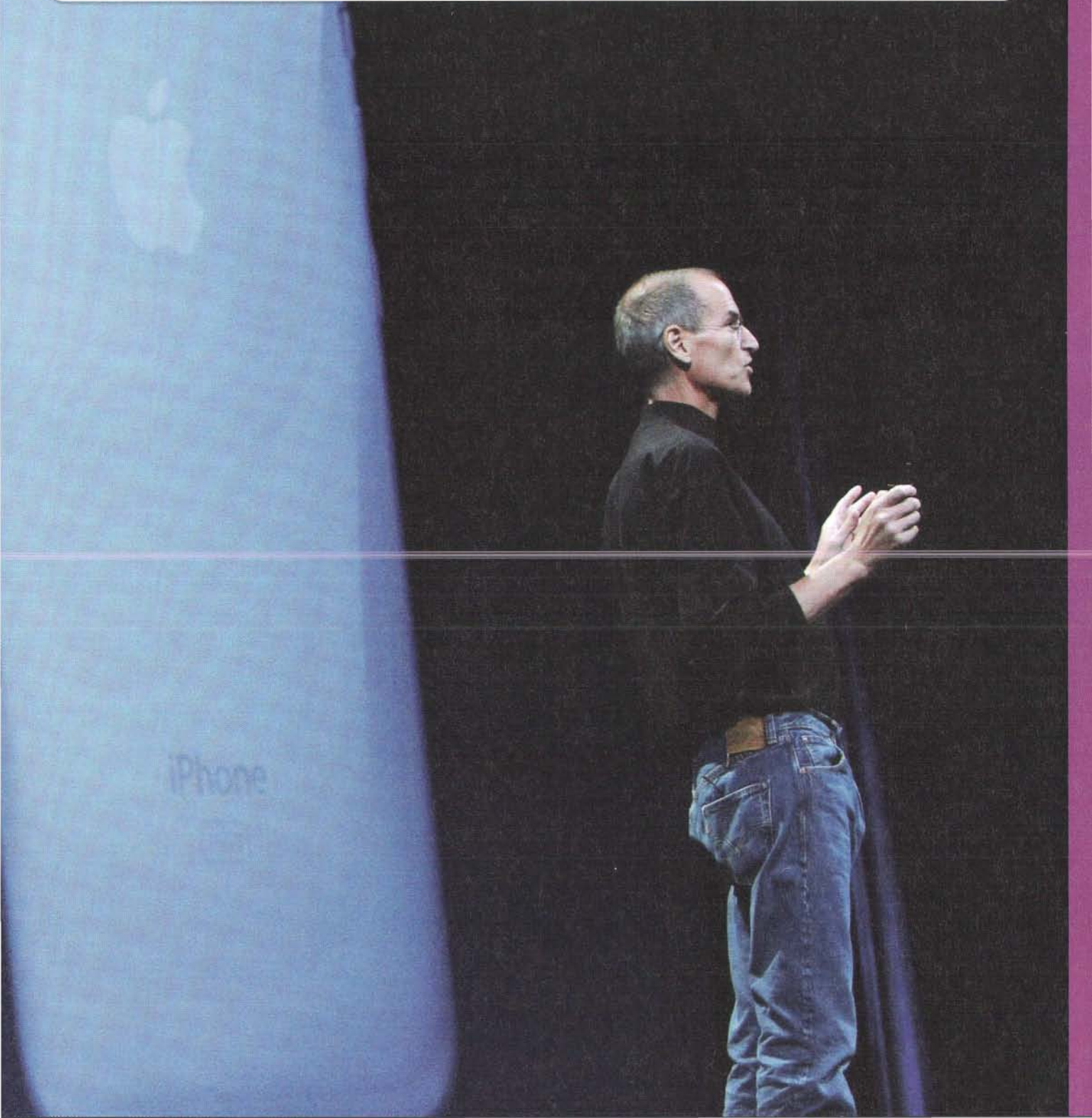
we'll be exploring what the speed and stability enhancements mean for the Mac. With Apple declaring that Snow Leopard is all about consolidating Mac OS X's position as the world's most advanced operating system, we'll be asking: is it really worth your money, or should it be a free download for existing Leopard tamers?

CSS MADE SIMPLE, PART 2

If you've been following our beginners' course in switching to CSS for your web

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Buying Advice

Once you've chosen a Mac (see the A-List, p82), you need to know how to go about buying it, and any software and peripherals you might need.

Third-party hardware and software are available from a wide, and sometimes daunting, variety of sources. The easiest way to buy is through a mail order outlet, many of which can be found on the following pages. Phone around to find the best deals and get the best advice. Make sure you're about when the goods are delivered – many dealers charge extra for next-day delivery.

Many of the leading mail order companies now allow orders to be made online via their websites. In addition, non-Mac-specific online stores have a wide range of cross-platform products available, but double-check your purchase is Mac-compatible before you buy.

All Apple's products are available online from the Apple Store, which allows Macs to be configured to your individual requirements and built to order.

A selection of third-party products are also available. Bear in mind, though, that dealers tend to offer more competitive prices and faster delivery times.

Macs are becoming increasingly available on the high street. Many larger cities now have AppleCentres, flagship

Mac-only stores that offer a high level of expertise. Macs and Mac peripherals can also be found in Apple-authorized resellers, branches of John Lewis, PC World and larger Dixons and Currys stores.

Buying from a local dealer has its advantages – you can see your purchase working before you leave the shop, and you should also be able to get advice from the sales assistant. However, many of the best bargains are available from mail order dealers. It pays to know what you want before you buy, and watch out for hidden extras when you order, such as cables or consumables.

Most purchases are trouble-free, but, before you part with any cash, check that the products you want to buy are in stock, the precise terms of delivery, warranties, technical support and payment. Make sure that the specifications are right and that the reseller understands exactly what you want. Confirm telephone orders in writing and keep copies of all documents, including invoices, delivery notes and bank statements. Check all goods before taking delivery, and if this isn't possible mark the delivery note 'Unchecked'.

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non-delivery (note that debit cards aren't covered by this act). It's illegal for money to be taken from your account before the delivery of goods. If this happens, keep a copy of the relevant credit card statements. Some mail order companies accept debit cards and cheques but if you pay with these, you won't have protection against non-delivery.

If you do encounter problems, first call the supplier. The supplier, and not the manufacturer, is responsible for helping you. Never agree to faulty items being repaired – you will lose your right to reject the goods and ask for a full refund. Insist on a replacement or refund. If the supplier is unwilling to help, contact a consumer association, your local Trading Standards Office or the Advertising Standards Authority (asa.org.uk). The MacUser Ombudsman may be able to help liaise with a problematic supplier. Any complaints should be sent in writing to MacUser.

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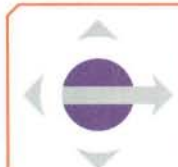
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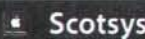
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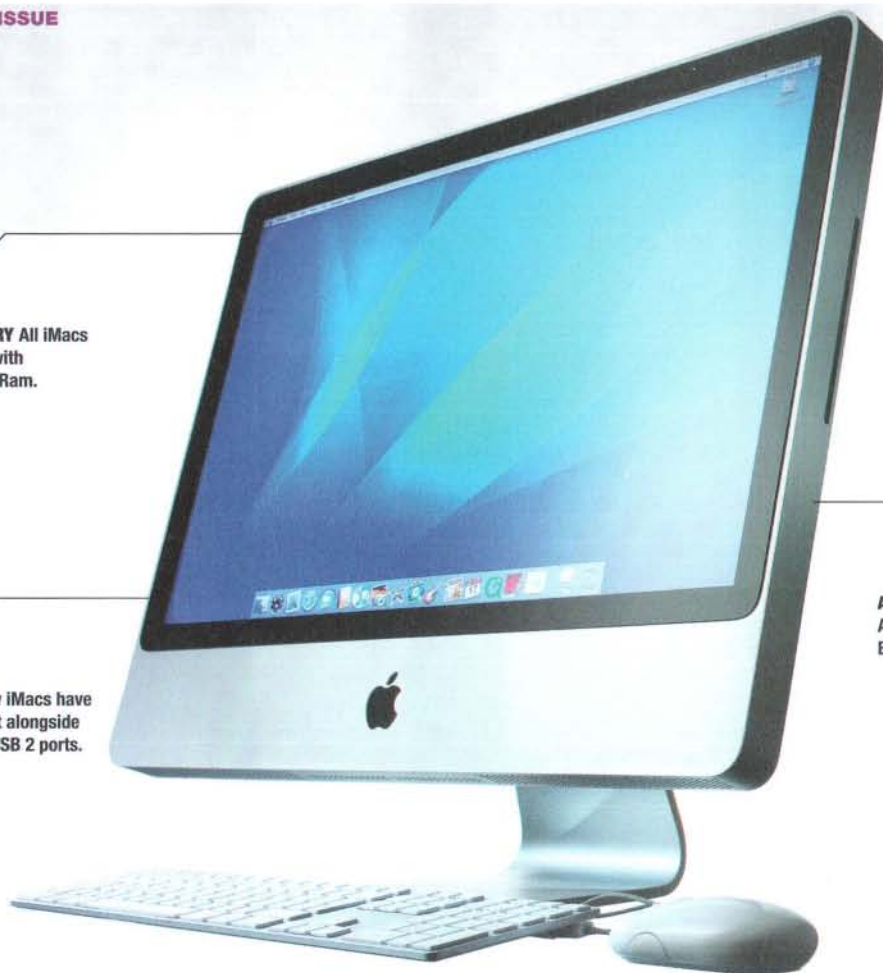
IN FOCUS THIS ISSUE

iMac

MEMORY All iMacs come with 1GB of Ram.

FIREWIRE The new iMacs have a FireWire 800 port alongside FireWire 400 and USB 2 ports.

AIRPORT AND BLUETOOTH All iMacs have AirPort Extreme, Bluetooth and Gigabit Ethernet.



The aluminium-encased iMac features a glossy glass-coated screen and comes in three variants: 20in 2.4GHz Core 2 Duo, a 20in 2.66GHz, and 24in 2.8GHz. There's also an option to upgrade the 24in iMac to a 3.06GHz Core 2 Extreme processor. Standard Ram across the board is 2GB except for the 2.4GHz 20in which has 1GB, with a maximum of 4GB possible in two slots. The lower-end 20in model has a 250GB hard drive, the other

two iMacs have a 320GB drive. All have an 8x SuperDrive. Graphics on the slower 20in model are handled by an ATI Radeon HD 2400 XT with 128MB of GDDR3 memory, while the other two have ATI Radeon HD 2600 Pro with 256MB of GDDR3 memory.











All iMacs have built-in 802.11n AirPort Extreme, Bluetooth 2.0, and Gigabit Ethernet. There are two USB 2 ports on the re-designed keyboard, and a further three on the back of the iMac – not to mention

one FireWire 400 port, one FireWire 800, audio input and output jacks, which support both digital and analogue audio, a video out port, and a built-in iSight camera.











The new keyboard features additional function keys and full numeric keypad, or you can opt for a Bluetooth keyboard without the extra keys and keypad. Other optional upgrades include a massive 1TB hard drive, and a USB modem.






NEXT ISSUE Mac Pro

PRODUCT NAME	RATING	PRICE	REVIEW	DIMENSIONS
iMAC Last revision April 2008				
iMac 20in 2.4GHz	Not yet reviewed	£799 (680 ex VAT)	Pending	Width 485mm Depth 189mm Height 469mm Weight 9.1kg
CPU Intel Core 2 Duo + Ram 1GB Hard Disk 250GB + Drives 8x Double layer SuperDrive				
iMac 20in 2.66GHz	Not yet reviewed	£949 (808 ex VAT)	Pending	Width 485mm Depth 189mm Height 469mm Weight 9.1kg
CPU Intel Core 2 Duo + Ram 2GB Hard Disk 320GB + Drives 8x Double layer SuperDrive				
iMac 24in 2.8GHz	Not yet reviewed	£1149 (£978 ex VAT)	Pending	Width 569mm Depth 207mm Height 520mm Weight 11.5kg
CPU Intel Core 2 Duo + Ram 2GB Hard Disk 320GB + Drives 8x Double layer SuperDrive				
iMac 24in 3.06GHz	Not yet reviewed	£1389 (£1182 ex VAT)	Pending	Width 569mm Depth 207mm Height 520mm Weight 11.5kg
CPU Intel Core 2 Duo + Ram 2GB Hard Disk 500GB + Drives 8x Double layer SuperDrive				

MAC MINI Last revision August 2007				
Mac mini 1.83GHz	    	£399 (£340 ex VAT)	31 August 2007	Width 165mm Depth 165mm Height 51mm Weight 1.31kg
CPU Intel Core 2 Duo + Ram 1GB + Hard disk 80GB + Drives DVD/CD-RW				
Mac mini 2GHz	    	£499 (£425 ex VAT)	31 August 2007	Width 165mm Depth 165mm Height 51mm Weight 1.31kg
CPU Intel Core 2 Duo + Ram 1GB + Hard disk 120GB + Drives Double Layer SuperDrive				

MAC PRO Last revision January 2008				
Mac Pro 2.8GHz Eight Core Intel Xeon	       	£1749 (£1488 ex VAT)	14 March 2008	Width 206mm Depth 475mm Height 511mm Weight 19.2kg
CPU Intel Core 2 Duo Xeon + Ram 2GB + Hard disk 320GB + Drives 16x Double Layer SuperDrive				
Mac Pro 3GHz Eight Core Intel Xeon	Not yet reviewed	£2249 (£1914 ex VAT)	Pending	Width 206mm Depth 475mm Height 511mm Weight 19.2kg
CPU Intel Core 2 Duo Xeon + Ram 2GB + Hard disk 320GB + Drives 16x Double Layer SuperDrive				
Mac Pro 3.2GHz Eight Core Intel Xeon	Not yet reviewed	£2759 (£2348 ex VAT)	Pending	Width 206mm Depth 475mm Height 511mm Weight 19.2kg
CPU Intel Core 2 Duo Xeon + Ram 2GB + Hard disk 320GB + Drives 16x Double Layer SuperDrive				

MACBOOK Last revision February 2008				
MacBook 2.1GHz	    	£699 (£594 ex VAT)	28 March 2008	Width 325mm Depth 227mm Height 27.5mm Weight 2.36kg
CPU 2.1GHz Intel Core 2 Duo + Ram 1GB + Hard disk 120GB + Drives DVD/CD-RW				
MacBook 2.4GHz	    	£829 (£705 ex VAT)	28 March 2008	Width 325mm Depth 227mm Height 27.5mm Weight 2.36kg
CPU 2.4GHz Intel Core 2 Duo + Ram 2GB + Hard disk 160GB + Drives 8x Double Layer SuperDrive				
MacBook 2.4GHz (Black)	    	£949 (£850 ex VAT)	28 March 2008	Width 325mm Depth 227mm Height 27.5mm Weight 2.36kg
CPU 2.4GHz Intel Core 2 Duo + Ram 2GB + Hard disk 250GB + Drives 8x Double Layer SuperDrive				


MACBOOK AIR Introduced January 2008				
MacBook Air 1.6GHz	    	£1199 (£1020.43 ex VAT)	29 February 2008	Width 32.5cm Depth 22.7cm Height 1.94cm (max) Weight 1.36kg
CPU Intel Core 2 Duo 1.6GHz + Ram 2GB + Hard Disk 80GB + Optical drive None				
MacBook Air 1.8GHz	Not yet reviewed	£2028 (£1726 ex VAT)	Pending	Width 32.5cm Depth 22.7cm Height 1.94cm (max) Weight 1.36kg
CPU Intel Core 2 Duo 1.8GHz + Ram 2GB + Hard Disk 64Gb solid state + Optical drive None				



MACBOOK PRO Last revision February 2008				
MacBook Pro 2.4GHz 15.4in	    	£1299 (£1105 ex VAT)	28 March 2008	Width 358mm Depth 244mm Height 25.4mm Weight 2.54kg
CPU 2.4GHz Intel Core 2 Duo + Ram 2GB + Hard disk 200GB + Drives 8x Double Layer SuperDrive				
MacBook Pro 2.5Hz 15.4in	    	£1599 (£1360 ex VAT)	28 March 2008	Width 358mm Depth 244mm Height 25.4mm Weight 2.54kg
CPU 2.5GHz Intel Core 2 Duo + Ram 2GB + Hard disk 250GB + Drives 8x Double Layer SuperDrive				
MacBook Pro 2.5GHz 17in	    	£1799 (£1531 ex VAT)	28 March 2008	Width 392mm Depth 265mm Height 25.4mm Weight 3.1kg
CPU 2.5GHz Intel Core 2 Duo + Ram 2GB + Hard disk 250GB + Drives 8x Double Layer SuperDrive				




XSERVE Last revision January 2008				
Xserve 2.8GHz Quad Core Intel Xeon	    	£1999 (£1701 ex VAT)	11 April 2008	Width 447mm Depth 762mm Height 44mm Weight 14.4kg
CPU 2GHz Intel Core 2 Duo Xeon + Ram 2GB + Hard disk 80GB + Drives 8x Superdrive				
Xserve 2.8GHz Eight Core Intel Xeon	Not yet reviewed	£2319 (£1074 ex VAT)	Pending	Width 447mm Depth 711mm Height 44mm Weight 14.4kg
CPU Intel Core 2 Duo Xeon + Ram 2GB + Hard disk 80GB + Drives 8x Superdrive				
Xserve 3GHz Eight Core Intel Xeon	Not yet reviewed	£2819 (£2399 ex VAT)	Pending	Width 447mm Depth 711mm Height 44mm Weight 14.4kg
CPU 3GHz Intel Core 2 Duo Xeon + Ram 2GB + Hard disk 80GB + Drives 8x Superdrive				
















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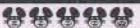


PRODUCT NAME	RATING	PRICE	REVIEW	CONTACT
PRINTERS				
Canon Pixma MP600R		£157 (£134 ex VAT)	12 October 2007	Canon 0870 608 8855 + canon.co.uk
BEST A4 MULTI-FUNCTION INKJET PRINTER Excellent quality photos, well specified and very fast, this Pixma led the pack in our Labs test.				
Brother MFC-845CW		£230 (£196 ex VAT)	2 March 2007	Brother 0845 606 0626 + brother.co.uk
Excellent, well-featured multifunction inkjet printer with fast output; USB, Ethernet and wifi connections make this perfect for small business or home office user.				
Konica Minolta Magicolor 5570		£1173 (£999 ex VAT)	25 May 2007	Konica Minolta 01784 442255 + konicaminolta.co.uk
Workhorse printer with high-quality output and high-speed printing, it also comes with a three-year warranty.				
Canon Pixma iP2500		£39 (£34 ex VAT)	27 April 2007	Canon 08705 143723 + canon.co.uk
A no frills A4 inkjet that produces great results at decent speeds.				
HP Photosmart Pro B9180		£407 (£346 ex VAT)	4 January 2008	HP 0845 270 4000 + hp.com/uk
BEST A3 INKJET PRINTER The perfect balance between speed and quality with excellent colour reproduction.				
HP Photosmart 8750		£264 (£225 ex VAT)	16 March 2007	HP 0845 270 4000 + hp.com/uk
Great budget A3 printer that produces quality prints and has Ethernet, USB and PictBridge support.				
Konica Minolta Magicolor 2530 DL		£212 (£180 ex VAT)	19 January 2007	Konica Minolta 01784 442255 + konicaminolta.co.uk
Robust and affordable colour laser with great output and a small footprint.				
Epson Stylus Pro 3800		Price £999 (£850 ex VAT)	30 March 2007	Epson 0800 220546 + epson.co.uk
An A2 sized printer that can output borderless prints at sizes up to 22 x 17in – it delivers high-quality prints with natural and realistic tones.				
Mitsubishi CP3800DW		£1879 (£1599 ex VAT)	23 May 2008	Mitsubishi 01707 278684 + mitsubishielectric.co.uk
Versatile, high-speed dye-sub printer, aimed at event photographers, which outputs fantastic quality images.				
AUDIO HARDWARE				
LaCie FireWire Speakers		£69 (£58 ex VAT)	16 February 2007	LaCie 020 7233 8338 + lacie.co.uk
These Neil Poulton designed speakers are powered by FireWire and provide deep bass and crisp treble for great audio quality.				
Kensington Pico FM Transmitter		£20 (£17 ex VAT)	2 March 2007	Kensington + uk.kensington.com
BEST AUDIO HARDWARE FM transmitter for your iPod, it's simple to use and displays the radio frequency in large type on the iPod screen.				
iPod touch 16GB		£269 (£229 ex VAT)	28 September 2007	
BEST PORTABLE MUSIC PLAYER The iPod of choice for the <i>MacUser</i> office, great for music, video and surfing the web.				
iHome iH19		£59 (£51 ex VAT)	16 February 2007	Channel Dynamics 0870 607 0540 + ihomeintl.com
Portable iPod speakers that are robust and provide decent audio quality. Perfect for a day out at the beach, a picnic or whatever you fancy.				
Terratec Noxon iRadio		£127 (£108 ex VAT)	16 March 2007	Terratec + uk.terratec.net
Easy to use Internet radio that has great audio quality and can be used wirelessly.				
iMainGo		£59 (£69 ex VAT)	16 March 2007	AMMiro 01392 426473 + imaingo.com
Ultra compact mini speakers for your iPod with surprisingly good audio quality and a window that lets you see the screen when the case is closed.				
XtremeMac Luna		£79 (£68 ex VAT)	30 March 2007	XtremeMac + xtrememac.com
iPod radio alarm that sounds great and looks fantastic. The Luna is compatible with any dockable iPod.				
Tivoli Audio iYiYi		£275 (£234 ex VAT)	13 April 2007	Tivoli Audio 01279 501111 + tivoli-audio.co.uk
iPod dock compatible speakers that offer great quality audio and cool retro-styling.				
XtremeMac Tango		£105 (£89 ex VAT)	5 January 2007	XtremeMac + xtrememac.com
Great audio and fantastic looks combine to make this a great iPod speaker system – it's cheap, too.				
Klipsch iGroove HG		£180 (£153 ex VAT)	5 January 2007	Klipsch + klipsch.com
It's a little bit pricey, but amazing quality audio is produced by this small unit.				
Bose Computer MusicMonitor		£279 (£237 ex VAT)	18 January 2008	Bose + bose.co.uk
These speakers take up next to no room on your desk and sound great – they are expensive though.				
JBL Radial		£160 (£136 ex VAT)	5 January 2007	Harman Consumer 020 8731 4670 + jbl.com
An unusual design from JBL, but it still produces high-quality audio.				
DIGITAL CAMERAS				
Nikon D300 (with lens kit)		£1459 (£1242 ex VAT)	7 December 2007	Nikon 0800 230220 + nikon.co.uk
BEST DIGITAL SLR An update to the D200, this has a 12.3-megapixel sensor, 3in colour screen and can shoot up to six frames per second.				
Fujifilm FinePix F40fd		£199 (£169 ex VAT)	11 May 2007	Fujifilm 0870 084 1310 + fujifilm.co.uk
An 8.3-megapixel camera that's fast and offers great colour reproduction – it also produces very fine detail in images.				
Canon Ixus 900 Ti		£224 (£191 ex VAT)	3 August 2007	Canon 08705 143723 + canon.co.uk
BEST CONSUMER DIGITAL CAMERA Tiny, elegant and tough, this 10-megapixel camera produces excellent images.				
Fujifilm FinePix S5 Pro		£999 (£850 ex VAT)	30 March 2007	Fujifilm 0870 084 1310 + fujifilm.co.uk
A quality pro-spec digital SLR, which accepts Nikon F-mount lenses and offers extended dynamic range and great colour rendition.				
Sony Cyber-Shot DSC-T50		£299 (£255 ex VAT)	16 March 2007	Sony 08705 111 999 + sony.co.uk
Slim, stylish 10.1-megapixel compact camera, which produces quality snaps.				
Pentax Optio A40		£189 (£160 ex VAT)	28 March 2008	Pentax 0870 736 8299 + pentax.co.uk
Pocket-sized compact that produces great images, is easy to use and performs brilliantly.				
Nikon D60		£445 (£378 ex VAT)	28 March 2008	Nikon 0800 230220 + nikon.co.uk
Well-built digital SLR that produces great quality pictures supplied with a fine lens and an impressive 10-megapixel CCD.				

PRODUCT NAME	RATING	PRICE	REVIEW	CONTACT
Sony Alpha 100		£1099 (£936 ex VAT)	23 November 2007	Sony 08705 111 999 + sony.co.uk
An alternative to Canon's Eos 40D and the Nikon D300, which features a 12.2-megapixel sensor and 3in LCD display.				
Canon EOS 40D (with lens kit)		£960 (£816 ex VAT)	26 October 2007	Canon 08705 143723 + canon.co.uk
BEST DIGITAL SLR Superbly built digital SLR for anyone who wants to make the step up from the lower end of the market to a model with more features.				
Leica C-Lux 1		£323 (£274 ex VAT)	10 November 2006	Leica 01908 256400 + leica-camera.com
A 6-megapixel compact from a company renowned for its optical skills. This camera has a built-in image stabiliser for great shots in low light.				

DV CAMERA				
Canon HF100		£600 (£510 ex VAT)	23 May 2008	Canon 08705 143723 + canon.co.uk
High-definition camcorder that records to SDHC media, is easy to use and handles well, and which produces beautiful video.				
JVC GZ-MG505		£875 (£744 ex VAT)	7 July 2006	JVC 0870 330 5000 + jvc.co.uk
Consumer DV camcorder that eschews tape in favour of an internal 30GB hard disk for video storage, eliminating the problems of transport noise heard on some other units.				

SCANNERS				
Epson Perfection 4490 Photo		£199 (£169 ex VAT)	14 October 2005	Epson 0800 220 546 + epson.co.uk
BEST FLATBED SCANNER Flatbed scanner with film adaptor and Digital Ice technology for restoring damaged images.				
HP ScanJet G4050		£199 (£169 ex VAT)	30 March 2007	HP 0845 270 4000 + hp.com/uk
Good quality reflective scanner with a film adaptor, although it's a bit expensive.				
Fujitsu SnapScan 510M		£563 (£479 ex VAT)	23 November 2007	Fujitsu 020 8731 3450 + fujitsu.com/uk
Easy to set-up and use document scanner that does exactly what its manufacturers says it will without any fuss.				

STORAGE DEVICES				
LaCie d2 Quadra 500GB		£113 (£95.99 ex VAT)	9 November 2007	LaCie 020 7872 8000 + lacie.com/uk
USB 2, FireWire 400 and 800 and an eSata port mean you can connect this hard drive to a number of sources.				
Freecom Hard Drive Pro USB2 & FireWire		£121 (£103 ex VAT)	9 November 2007	Freecom + freecom.com
BEST EXTERNAL HARD DRIVE A fast external drive that's perfect for a Mac mini and includes a USB and FireWire hub.				
Formac Disk Mini		£91 (£77 ex VAT)	19 January 2007	Formac 020 8996 5770 + formac.co.uk
Cheap and fast USB hard drive, which is stylishly designed and very portable.				
Seagate Momentus 5400.3		£108 (£92 ex VAT)	19 January 2007	Seagate 01628 890366 + seagate.com
BEST INTERNAL HARD DRIVE Fast internal drive for a MacBook or MacBook Pro. At 160GB it's the perfect upgrade for all but the range topping 17in MacBook Pro.				
LaCie Brick		£111 (£94 ex VAT)	19 January 2005	LaCie 020 7872 8000 + lacie.com/uk
Hard drive that is shaped like a Lego brick. This is no toy, though, with excellent performance and a solid feel to its construction.				
LaCie d2 Extreme		£174 (£148 ex VAT)	19 January 2007	LaCie 020 7872 8000 + lacie.com/uk
A good value, robust hard drive that is fast enough for nearly all uses.				
Western Digital MyBook Pro Triple Interface		£177 (£151 ex VAT)	19 January 2007	Western Digital 01372 360055 + wdmybook.com
Great performance and good looks, along with its price, single out the MyBook Pro Triple Interface drive for special attention.				
Hitachi Travelstar 5K160		£80 (£68 ex VAT)	19 January 2007	Hitachi + hitachigst.com
Well priced replacement drive for a Mac laptop.				
Samsung HD501LJ		£122 (£104 ex VAT)	19 January 2007	Samsung + samsung.com
Decent quality and capacity replacement drive for a desktop Mac.				
Western Digital Raid Edition WD5000YS		£122 (£104 ex VAT)	19 January 2007	Western Digital 01372 360055 + westerndigital.com
Fast and cheap 3.5in internal hard drive, perfect for multiple installations such as the Mac Pro.				
Freecom DataTank		£290 (£247 ex VAT)	25 May 2007	Freecom 01423 704700 + freecom.com
Low-priced and very small Raid array with up to 1TB of storage. It also has a one-button back-up solution.				
G-Raid 2		£316 (£269 ex VAT)	25 May 2007	Global Distribution 0870 464 0600 + g-technology.com
Highly portable raid solution that gets close to the maximum speed for FireWire 800. Perfect for uncompressed standard definition TV.				
ProAvio EditBox 8PM		£1050 (£894 ex VAT)	25 May 2007	Planetvideo 08707 605365 + planetvideosystems.com
BEST EXTERNAL RAID ARRAY Unbelievably fast and built to withstand constant use, this Raid array is the best available.				
Sonnet Fusion 500P		£690 (£587 ex VAT)	25 May 2007	AM Micro 01392 426473 + sonnettech.com
Flexible and well-constructed Raid with great options.				
Stardom SohoRaid SR3610-2S-WBC		£340 (£289 ex VAT)	25 May 2007	Radius 0870 242 3325 + radius.com
Great quality unit with hot swappable drives and a low price.				

DISPLAYS AND PROJECTORS				
Epson EMP-TW620		£949 (£808 ex VAT)	2 February 2007	Epson 08702 416900 + epson.co.uk
BEST PROJECTOR A hugely versatile projector with HDMI compatibility and whisper-quiet operation.				
ThemeScene HD70		£676 (£575 ex VAT)	2 February 2007	ThemeScene (Optoma) 01923 691 866 + optoma.co.uk
Well-priced HD capable projector with great image quality – its small dimensions are also highly commendable.				
Epson EMP-1710		£1093 (£930 ex VAT)	2 February 2007	Epson 08702 416900 + epson.co.uk
High-quality business projector that's perfect for presentations but is equally at home with video.				






A-LIST

PRODUCT NAME	RATING	PRICE	REVIEW	CONTACT
Dell 3400MP		£821 (£699 ex VAT)	2 February 2007	Dell 0870 152 4699 + dell.co.uk
Portable projector that's cheap to run, is bright and is supplied with a sturdy carry case.				
Optoma EP7150		£662 (£563 ex VAT)	2 February 2007	Optoma 01923 691866 + optoma.co.uk
High-quality business projector that's perfect for presentations but is equally at home with video.				
Samsung SyncMaster 961BW		£199 (£169 ex VAT)	27 April 2007	Samsung + samsung.co.uk
Great quality 19in widescreen LCD panel that's very adjustable and has fantastic build quality.				
Philips 190CW7CS		£147 (£125 ex VAT)	27 April 2007	Philips + philips.co.uk
BEST WIDESCREEN TFT A 19in widescreen monitor, it offers fantastic colour quality and is great value.				
Eizo FlexScan S1921SH		£362 (£308 ex VAT)	27 April 2007	Eizo + eizo.co.uk
BEST 4:3 TFT A professional quality panel that has a solid stand and is perfect for colour critical work.				
Viewsonic ViewDock VX2245		£320 (£272 ex VAT)	16 March 2007	Viewsonic + viewsonic.co.uk
A stylish monitor with a built-in iPod dock. It's also got lots of scope for fine colour adjustments.				

NETWORKING



SMC SMC7904WBRA2		£37 (£32 ex VAT)	30 March 2007	SMC Networks 0871 277 9802 + smc.com
Cheap modem/router with plenty of features – it's simple to use and not bad looking.				
Belkin Wireless G+ MIMO		£76 (£65 ex VAT)	30 March 2007	Belkin 01933 352000 + belkin.co.uk
BEST NETWORK TOOL Super fast and easy to set-up wireless modem/router that features a lot of options and extras.				
Buffalo WMBR-G54		£41 (£36 ex VAT)	30 March 2007	Buffalo Technology 01753 555000 + buffalo-technology.com
Not the prettiest modem/router out there, but it works well and is good value nonetheless.				
Netgear DG834N		£89 (£75 ex VAT)	30 March 2007	Netgear 01344 458200 + netgear.co.uk
Stylishly designed and super fast modem/router that's 802.11n compatible.				
Apple Time Capsule		£199 (£169 ex VAT)	28 March 2008	Apple + apple.com/uk
Combined 500GB hard drive and 802.11n wireless router designed to work with Mac OS X Leopard's Time Machine.				
Vodafone Mobile Connect USB Modem		£57 (£49 ex VAT)	2 February 2007	Vodafone 08080 408408 + vodafone.co.uk
3G compatible modem for those on the go – it's small and easy to use.				
Devolo dLAN 200 AVdesk		£139 (£118 ex VAT)	24 November 2006	Devolo 01865 244141 + devolo.co.uk
A home networking solution for AV enthusiasts wanting to send HD video around the house or office without interference or messy cabling.				





MISC HARDWARE





Miglia TVDuo		£139 (£119 ex VAT)	19 January 2007	Miglia 0870 7472988 + miglia.co.uk
Two tuners means you can watch one channel whilst recording another or they can be combined to improve reception.				
SanDisk ImageMate 12-in-1 Card reader		£14 (£12 ex VAT)	11 May 2007	SanDisk + sandisk.co.uk
Card reader that's fast, stylish and supports lots of card formats. The slots are labelled to make sure you always hit the right hole.				
Terratec Cynergy T USB XS Diversity		£70.49 (£59.99 ex VAT)	26 October 2007	CJ 020 8358 5858 + terratec.co.uk
BEST TV TUNER Compact TV tuner with two tuners for increased image quality. The small size makes it perfect for portable use with a MacBook or MacBook Pro.				
StealthPlug		£79 (£67 ex VAT)	25 May 2007	IK Multimedia 0800 093 4066 + ikmultimedia.com
Compact solution for plugging instruments directly into your Mac – it comes with a great software bundle too.				
Logitech NuLooq Navigator		£79 (£68 ex VAT)	19 January 2007	Logitech 020 7309 0127 + logitech.co.uk
Cool tool that not only looks good but is actually useful – a great way of streamlining your workflow.				




3D SOFTWARE

Google SketchUp Pro 6		£370 (£315 ex VAT)	16 February 2007	Google + sketchup.google.com
BEST 3D APPLICATION Easy-to-use but in-depth 3D creation tool. It's also much faster than previous versions.				
Poser 7		\$250	2 February 2007	e-frontier + e-frontier.com
BEST 3D MODELLING TOOL Slightly baffling but amazingly powerful 3D modelling tool.				
Vue 6 Infinite		£529 (£345 ex VAT)	30 March 2007	e-on Software 00 33 1 4314 2815 + e-onsoftware.com
Create photo-realistic landscapes and backgrounds with the much improved interface and animation controls.				
Home Design Studio		£89 (£76 ex VAT)	16 March 2007	Avanquest 01752 895100 + punchsoftware.com
3D home design software that's easy for beginners to use – perfect for those <i>Grand Design</i> projects you've been planning.				
Cheetah3D 4		\$129	27 April 2007	Martin Wengenmayer + cheetah3d.com
Skeletal animation system with easy to grasp interface and multi-threaded modelling tools.				
TurboCAD Mac Pro 2		£200 (£170 ex VAT)	2 March 2007	Avanquest 01752 895100 + punchsoftware.com
Extensive drawing and modelling tools make this the perfect application for planning and designing almost anything.				
LightWave 9.3		£599 (£510 ex VAT)	28 September 2007	NewTek 00 33 0557 262262 + newtek-europe.com
Universal Binary version with advanced cameras and faster OpenGL rendering in Modeler.				
Cinema 4D 10		£586 (£499 ex VAT)	5 January 2007	Maxon 01525 718181 + maxon.net
Powerful rendering and animation tool that can create realistic figures and objects.				

PRODUCT NAME	RATING	PRICE	REVIEW	CONTACT
VIDEO SOFTWARE				
Final Cut Studio		£849 (£723 ex VAT)	6 July 2007	Apple + apple.com/uk
BEST VIDEO APPLICATION High-end video editing suite. The choice of the pros, with everything in the box.				
FXhome VisionLab Studio		£299 (£254 ex VAT)	2 March 2007	Softline 01293 827900 + fxhome.com
Impressive professional quality video effects and compositing tool that offers amazing control, although the learning curve is steep.				

AUDIO SOFTWARE				
Blue Tubes Bundle V3		£229 (£195 ex VAT)	2 February 2007	Time & Space 01837 55200 + nomadfactory.com
BEST AUDIO PLUG-IN SUITE Fantastic replication of audio hardware in digital form.				
Zebra 2		\$199	5 January 2007	u-he + zebrasynth.com
Virtual synthesizer that has some great touches, including a wide range of features and controls.				
MegaSeg 4		\$249	16 February 2007	Fidelity Media + megaseg.com
DJ mixing software for those who have eschewed the wheel of steel for a more digital approach.				
EMI TG Limiter Pack		\$300	30 March 2007	Chandler Limited + chandlerlimited.com
Audio plug-in that mimics the Abbey Road set-up that the Beatles made famous.				

BUSINESS SOFTWARE				
Navicat 6.3.2		\$99	29 September 2006	Navicat + navicat.com
BEST BUSINESS TOOL A fantastic interface and a lot of flexibility make this the best high-end database for the Mac.				
LightSpeed 1.3.5		\$749	5 January 2007	Xsilva Systems Inc 00 1 514 9071801 + xsilva.com
Simple to use and fully featured point-of-sale software, which also looks good.				
4D 2004.4		£195 (£165 ex VAT)	29 September 2006	4D UK 01625 536178 + 4duk.com
Industrial-strength database solution for business users – it can connect directly to SQL backends and is scalable.				
Tommie		10p per user per day	16 February 2007	Tommie + tommie.co.uk
Web-based office management software, which lets you manage your business no matter where you or your staff are in the world.				

GAMES				
SketchFighter 4000 Alpha		\$19	19 January 2007	Ambrosia + ambrosiasw.com
BEST GAME Super cool <i>Asteroid</i> -style game – it's great fun and excellent value..				
Star Wars Empire at War		£39 (£34 ex VAT)	27 April 2007	Softline 01293 827900 + aspyr.com
The authentic galactic setting will amaze <i>Star Wars</i> fans and the good range of strategy and tactical combat make it a decent game, too.				
Imperial Glory		£34 (£28 ex VAT)	19 January 2007	Softline 01293 827900 + aspyr.com
Historically accurate war strategy game that is surprisingly deep and interesting.				

MISC SOFTWARE				
Plopp		£9 (£8 ex VAT)	30 March 2007	planet-plopp.com
BEST CREATIVE UTILITY Fun and addictive tool for creating 3D models and paintings. It's for kids but adults will be just as impressed.				
Scrivener		\$34	16 February 2007	literatureandlatte.com
Great writers tool that helps the creative process flow.				
MacDrive 7		\$49	30 March 2007	Mediafour + mediafour.com
Cool tool that allows you to share data between your Mac formatted drive and the Boot Camp Windows partition.				
Data Backup 3		\$59	27 April 2007	AMMicro 01392 426473 + prosofteng.com
Powerful yet simple to use utility for backing up all the precious data on your Mac.				
Adobe Photoshop CS3		Various	30 March 2007	Adobe + adobe.co.uk
BEST IMAGE MANIPULATION TOOL Simply the best image manipulation application available today.				
SpamSieve 2.6		\$30	13 April 2007	Michael Tsai + c-command.com
BEST UTILITY Block the never-ending torrent of spam from your inbox with this great application.				
iScrapbook		\$49	25 May 2007	Chronosnet.com
Useful replacement for the much missed pre-Mac OS X scrapbook tool.				
Coda		\$79	25 May 2007	Panic + panic.com/coda
A fully-featured web development tool that's great value for money.				
FlightCheck Professional 6		£351 (£299 ex VAT)	11 May 2007	Markzware 00 31 70 307 2977 + markzware.com
This is speedier than previous versions and supports the latest versions of Quark and InDesign.				
Thunderbird 2.0		Free	11 May 2007	mozilla.com/thunderbird
Free email client that is perfect if you're an habitual organiser, and it's much more useful than Apple's Mail application.				
Skim		Free	11 May 2007	skim-app.sourceforge.net
Amazingly fast open source PDF viewer, which offers annotation tools as well.				

MASTERCLASS

Making, titling and sharing iPhoto slideshows

Why take photos if not to show them to other people? And the best way of doing that is in an iPhoto slideshow. We walk you through the basics and share some titling tips.



Kit required iPhoto 08

Time 15 minutes

Goal To learn how to show off your pictures more professionally

Level Beginner

Fundamentally, philosophically even, iLife

is about helping you get more from your photos and movies. On a more practical level, that involves making it easy to present your photos and movies in an attractive, engaging and fun way. Nothing demonstrates the success of that approach better than iPhoto slideshows. Just as iMovie helps you condense hours of movie footage into something short and enjoyable, iPhoto slideshows are arguably the best method yet devised for distilling albums into an entertainment of exceptional quality.

Making an iPhoto slideshow could hardly be easier: simply select an event or album, or Command-click to select a bunch of thumbnails, and click on the

Slideshow button. That's literally all there is to it – just click on the play button and your slideshow is under way. If you want to be more creative, you can add a music backing, adjust slide durations, change transitions and add motion effects. This, too, is pretty straightforward, as is sharing slideshows on DVD or by exporting a QuickTime movie.

This Masterclass covers the basics of iPhoto slideshows, including creating a slideshow, adding music, editing overall settings, adjusting settings for individual slides and exporting your slideshow as a QuickTime movie. One thing Apple forgot to include in iPhoto is the ability to create a slideshow title, so we'll show you how to do that, too.

ABOUT THE AUTHOR

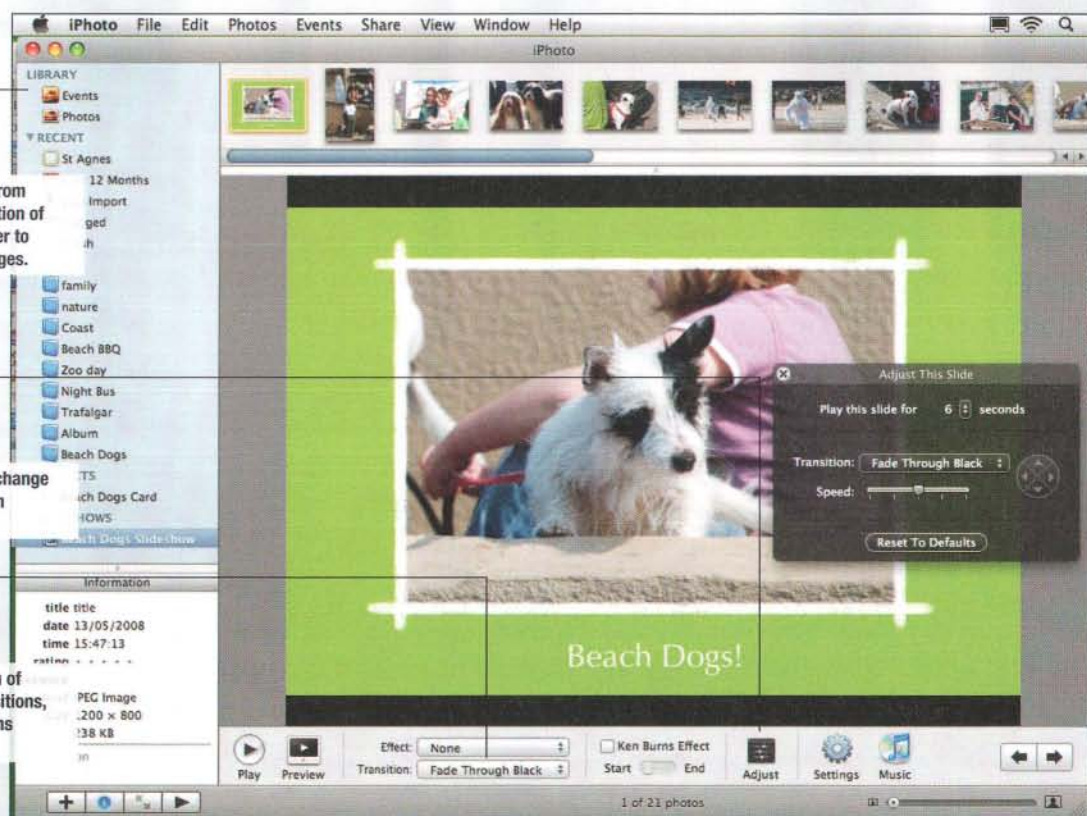
Ken McMahon is a freelance journalist and designer. He runs his own design consultancy and divides his time between London and the West Country.

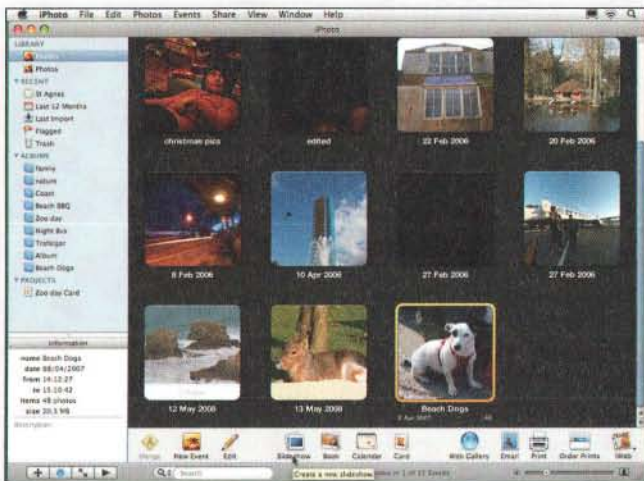
INTERFACE

Create an iPhoto slideshow from an event, album or any selection of photos. Use the photo browser to organise your slideshow images.

Click on the Adjust button to change the display time and transition settings for individual slides.

Use the controls at the bottom of the screen to set default transitions, add music and apply Ken Burns motion effects.

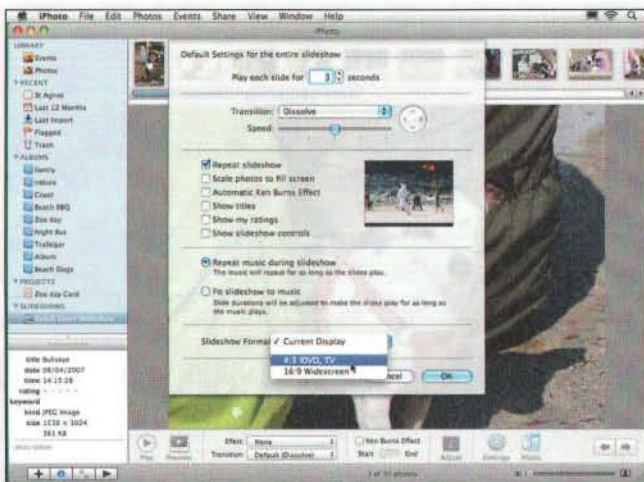




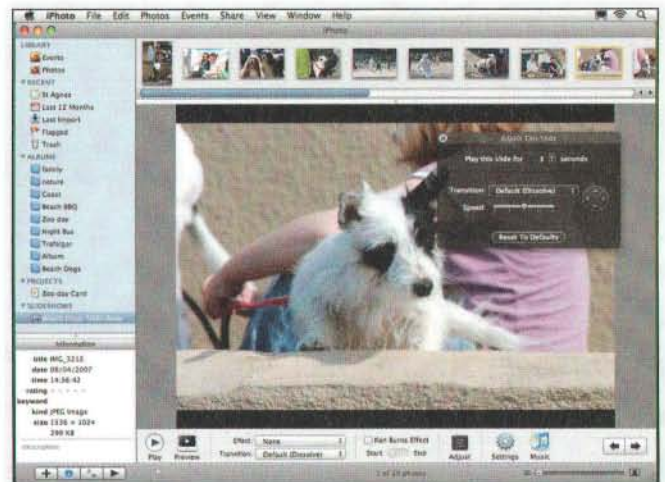
▲ STEP 01 NEW SLIDESHOW Launch iPhoto and select an Event or Album from which to create a slideshow. Don't worry if the event or album contains photos you don't want to include, as you can delete them from the slideshow later. Click on the Slideshow button at the bottom of the screen.



▲ STEP 02 ORDERING AND DELETING The new slideshow is added to the Slideshows section of the source list and the slideshow editor opens. Thumbnails of the contents are displayed in the photo browser at the top of the screen. Drag and drop the thumbnails to reorder them. To remove photos from the slideshow (but not from your library), select them and press backspace.



▲ STEP 03 SLIDESHOW SETTINGS Click the Settings button to change the default settings for the entire slideshow. Here, you can change the length of time for which photos are displayed, the default transition and whether titles, ratings and slideshow controls are displayed. If you plan to burn the slideshow to a DVD, select 4:3 iDVD, TV from the Slideshow Format pop-up menu.



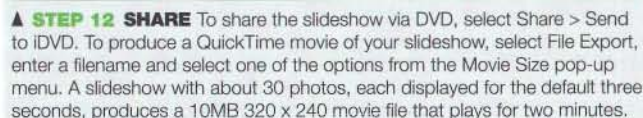
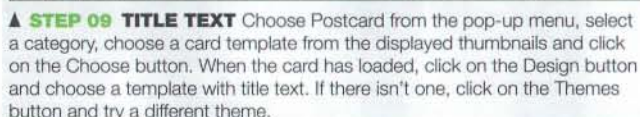
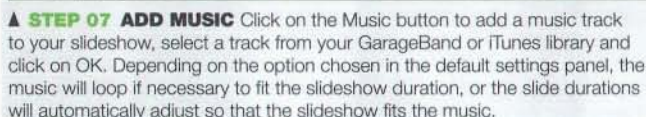
▲ STEP 04 INDIVIDUAL SETTINGS To edit the settings for an individual photo, first select it in the photo browser, and then click on the Adjust button. Use the Nudge buttons to change the length of time for which the slide is displayed. You can also select a different transition and adjust the transition speed and, for some transitions such as Push and Wipe, the direction.



▲ STEP 05 KEN BURNS START If you didn't check the Automatic Ken Burns Effect box in the default settings panel, you can apply it to individual images. The Ken Burns Effect gently pans or zooms a photo to create movement. First, tick the Ken Burns Effect checkbox then use the zoom slider to set the initial magnification for when the photo is first displayed.



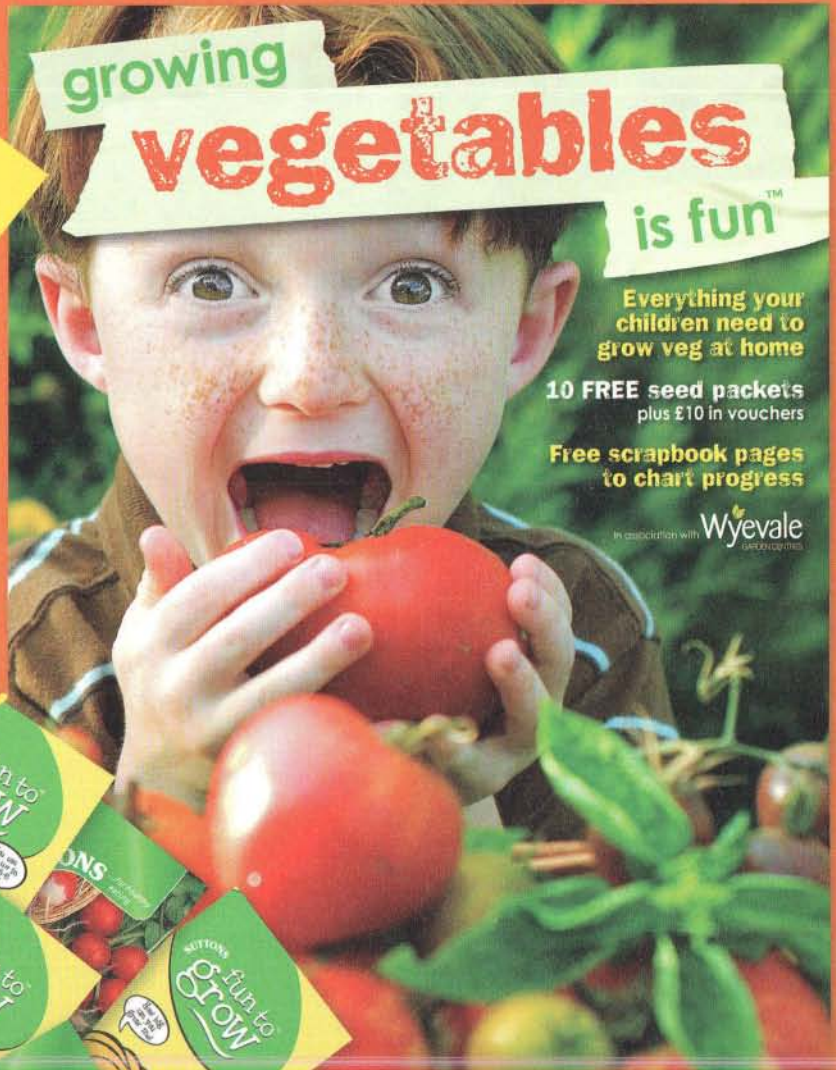
▲ STEP 06 KEN BURNS END Drag the Start/End switch to the End position, drag the zoom slider to set the final magnification and drag the image to set the final position. Press the preview button to see the effect in action. If there's a big difference between the start and end position and zoom, you may find you'll need to increase the display time as in step 4.



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Wyevale
GARDEN CENTRES

MASTERCLASS

Creating an instant-play DVD with DVD Studio Pro 4

Sometimes, you just want to create a quick DVD that auto-plays when inserted into a DVD drive. This is a very quick and easy task for DVD Studio Pro. Let's see how it's done.



Kit required Apple DVD Studio Pro 4

Time 20 minutes

Goal To create an menu-less, instant-start DVD from a previously-edited and compressed QuickTime movie file using DVD Studio Pro

Skill level Intermediate

If your video-editing project is being

undertaken either for a paying client or someone who has final approval on the finished product, you'll need to provide a viewing copy of the job so that they can make comments prior to sign-off.

There are a number of different ways in which you might go about delivering such a viewing copy, but let's assume you've been asked for a DVD. It's also reasonable to assume that the client might require timecode to be burnt-in to the picture in order to aid comments and to assist with frame-accurate markups as required.

The steps in this masterclass will come at the end of a workflow, when your movie has been completed.

Here, we will see how we can take a final output file and produce a first-play DVD using DVD Studio Pro 4. A first-play DVD differs from conventional DVDs in that it doesn't use any menus or other navigational aids. It simply plays as soon as the end-user pops it into a DVD player. All you need to get going is a finished project file – such as a QuickTime movie or even a compressed Mpeg-2 with its associated audio file – and a blank DVD.

It's useful to be aware if the video project is 4:3 or 16:9 widescreen, square or rectangular pixels, and using anamorphic widescreen compression within a 720 x 576i Pal file. However, that's not too important as the application should determine this automatically.

ABOUT THE AUTHOR

Colin Barrett has training in educational film and television production as well as spending many years as a professional video-maker and author. He regularly contributes digital video product reviews for *MacUser*. He's convinced that podcasting is the greatest invention since the wheel.

INTERFACE

The main output window is where you monitor project progress at all stages.

The Palette contains many visual and aural templates to provide you with a range of creative options when compiling a DVD that has menus.

Along the bottom of DVD Studio Pro's interface is the timeline. This is where you drag your assets in order to compile the project.

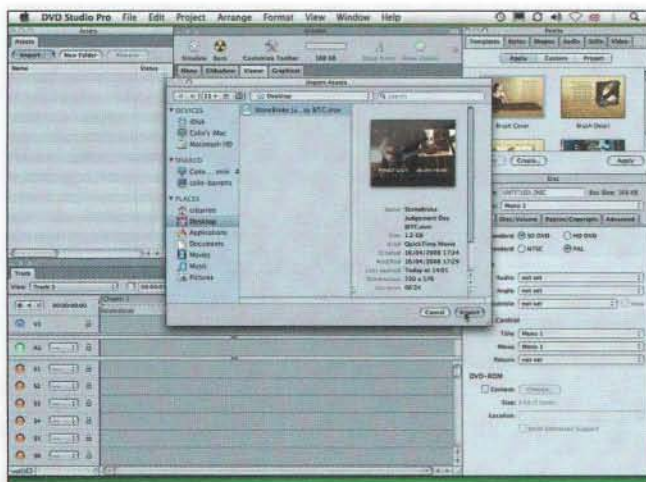




▲ STEP 01 PREVIEWING THE CLIP TO BE IMPORTED You can pull just about any clip into DVD Studio Pro and it will do the necessary work to prepare it for the authoring process. However, our previously edited clip file is the music video we prepared with Compressor 3 using basic 16:9 widescreen QuickTime export settings at standard Pal definition.



▲ STEP 02 SETTING PROJECT PREFERENCES DVD Studio Pro 4 is good at automatically determining the settings employed by an imported clip. However, it's worth checking that the application is set for your needs – especially in relation to standard or HD, 4:3 or 16:9 aspect ratio. Access the General settings dialog in the DVD Studio Pro > Preferences drop-down menu.



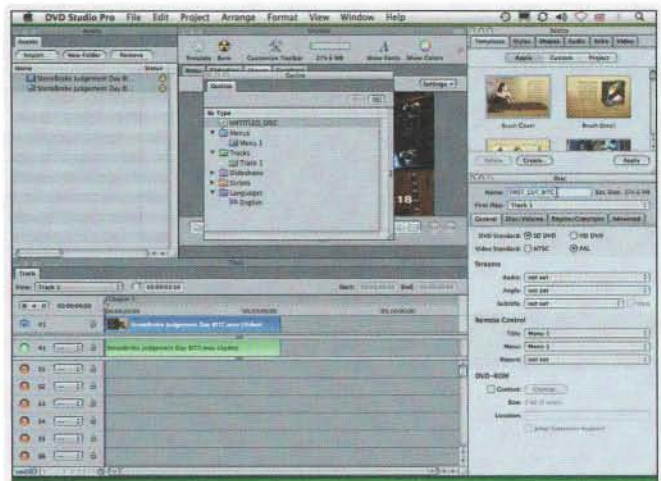
▲ STEP 03 IMPORTING THE MOVIE CLIP You're now ready to import the edited movie clip that is to be burned to DVD. In this case, we're importing a ready-made QuickTime .mov file, which has been exported from Compressor. Having checked that it conforms to Pal standard definition 16:9 specification, click the Import tab in the Assets folder to pull it in.



▲ STEP 04 THE TIMELINE Although the edited clip was saved as a single QuickTime file, DVD Studio Pro has separated the audio tracks from the video and placed the assets in the Assets folder. You only need the single clip file, so drag both elements and drop them onto the V1 video track on the timeline. The associated audio clips will find their own place on their audio tracks too.



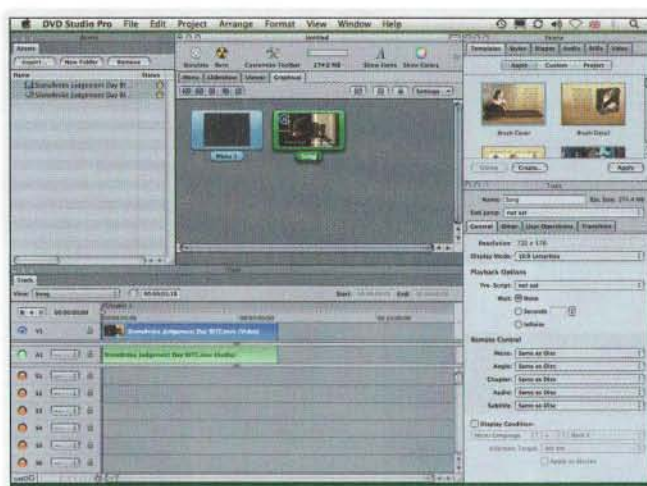
▲ STEP 05 MAKING IT A FIRST PLAY DISC This step is the most important part of the process. Select the clip on the timeline by clicking on it once, and then open the outline menu by clicking Window > Outline View. On Track 1, right-click to open a pop-up menu and select First Play. This will determine the behaviour of the DVD disc when first inserted into the player.



▲ STEP 06 GIVING THE DISC A NAME While you're in this menu, highlight and then click into the text field of Untitled Disc in order to rename the disc according to your preferences. Keep the name short, and use underscores rather than spaces. You should notice that we're doing this in the Name field of the Disc Inspector window (lower right).



▲ STEP 07 SIMULATING THE DVD DISC At this stage, you're almost there. Obviously, you don't want to create an expensive coffee coaster by burning a faulty DVD, so the application provides you with a chance to simulate how the DVD will perform. Click the Simulate button in the Outline View for a preview interface to open. The first play track should now start automatically.



▲ STEP 08 GIVING THE SONG A TITLE You might wish to change the name of the track to something more appropriate to the contents. Rather than the default Track 1, click the Graphical tab in the Outline View and then click on the track thumbnail itself to change its name. Note that the Inspector window (bottom right) also gives you the option to enter this data there, too.



▲ STEP 09 SETTING THE DVD REGION Although probably not of concern to you at this stage, but it's worth noting that you can limit the region of the world in which your disc will play. In the Inspector window (bottom right), click the Region/Copyright tab to display the numerous options. The application will offer up defaults, but you can change these if the client requires.



▲ STEP 10 DISC ENCRYPTION While you're in the Disc Inspector window, you can apply various forms of protection to your recording. In addition to limiting copying, you can also insert Macrovision encryption to your disc using either Type 1 or Type 2. Note that this is normally only applicable to the master when it is to be commercially replicated – and will only work with certain discs.



▲ STEP 11 BURNING THE DVD Once you're happy with your settings, and have checked that the DVD disc works in the simulation mode, you're ready to burn a disc. Pop a disc into the Mac's drive and click the Burn icon to set things rolling. The application will first encode the video and audio files prior to writing them to the disc in the correct format.



▲ STEP 12 CHECKING THE DVD DISC It might appear to be an obvious statement, but it's a good idea to check the disc first before forwarding it to your intended recipient. Pop it into either a standalone DVD player, which is connected to a TV set, or a computer's DVD drive in order to check that it looks and sounds okay, and that it starts to play automatically.

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CMU2413A



MASTERCLASS

Numbers table formatting

If you've come straight from Excel, the unusual table formatting tools in iWork's Numbers could prove deeply mystifying, so here's how they work.



Kit required iWork 08

Time 30 minutes

Goal Understanding the table formatting tools

Skill level Intermediate

The table formatting tools in Numbers are quite sophisticated compared to those in Excel. This is partly because of the way Numbers works with smaller, individual tables rather than a single, giant worksheet. These tables have two particularly interesting properties.

First, you can incorporate headers (for columns and rows) that consist only of labels and are never included in calculations, sorts or other data manipulation processes. You can also add 'footer' rows for totals and other analyses and, again, these always stay at the bottom and never get mixed up with the data itself. Second, you can define Table Styles that will give a consistent look to all your tables. These are

comparable to the text styles in Pages, in that they alter the appearance of your data, but not the data itself. It's possible, though, to save both the style and the content of a table for re-use using the Capture command. Note that these styles and 'captured' tables are document-specific in the same way that text styles in Pages are. However, once you've designed a set of tables and styles you're happy with, you can save them as a Numbers template.

This Masterclass illustrates a typical use for these tools – an invoice layout that's designed to reflect the colours and fonts used by a fictitious training company and that, once designed, is likely to be needed again and again in the future.

ABOUT THE AUTHOR

Rod Lawton has been a full-time technology journalist for more than 10 years after a long stint writing for and editing computer magazines. He uses his Macs for image editing, production and layout, writing presentations and all his office admin.

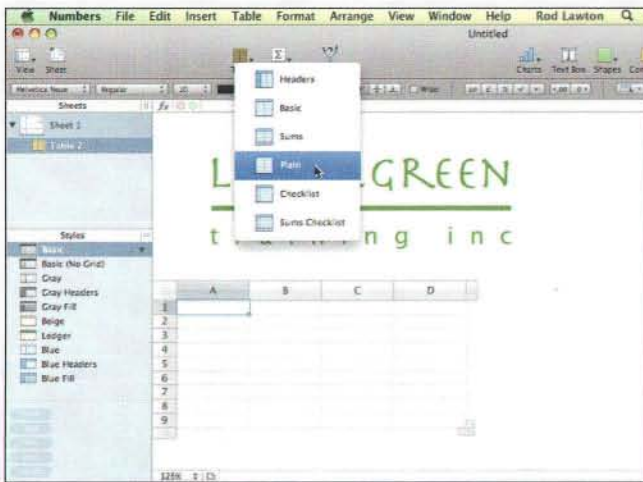
INTERFACE

The **Tables** button offers a range of preset designs, but you can **Capture** tables you've designed yourself, which adds them to this list.

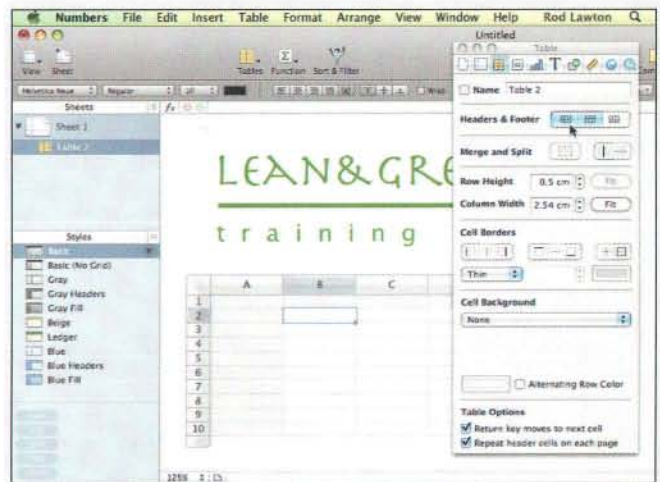
Headers are used to for column and row labels, while footers can display totals and other data. These can be formatted independently of the data.

Table Styles consist of fill colours, fonts and border styles for a table's data, headers and footers. They don't contain any content or formulas, though.

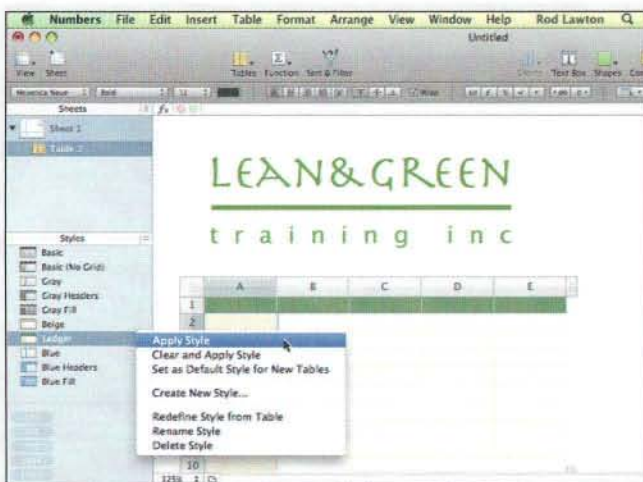
	Hours	Rate (£/hour)	Total	VAT @ 17.5%	Grand total
Mac installation	14	£35.00	£490.00	£85.75	£575.75
Software installation	2.5	£35.00	£87.50	£15.31	£102.81
Mac OS staff training	16	£45.00	£720.00	£126.00	£846
iWork training	22	£45.00	£990.00	£173.25	£1,163.25
Telephone support	8.5	£20.00	£170.00	£29.75	£199.75
On-site maintenance	3	£35.00	£105.00	£18.38	£123.38
Network training	4.5	£45.00	£202.50	£35.44	£237.94
	70.5	£37.14	£2,765.00	£483.88	£3,248.88



▲ **STEP 01 CREATING A NEW TABLE** New documents are created with a single, large table, but few users need a table of this size. One of Numbers' great advantages over Excel is its ability to accommodate multiple, smaller tables on a single worksheet. You can start, then, by deleting the default table and choosing a new one from the Tables pop-up menu on the toolbar.



▲ **STEP 02 TABLE HEADERS** In the previous step, we chose a Plain table, but some of these table designs come with headers included – here, the first row and/or column is used for labelling only, and doesn't form part of the data itself. Headers can be added or removed using the Table Inspector. Just click on the first and second buttons in the Header & Footer section.



▲ **STEP 03 APPLYING A TABLE STYLE** Once a table's been created, you can choose a Table Style by clicking one of the available Styles in the sidebar. The Ledger style, for example, is suitable for financial and accounting data. The thing to note about the Table Styles is that they define the appearance of the table but not dimensions or content. They're analogous to text styles.



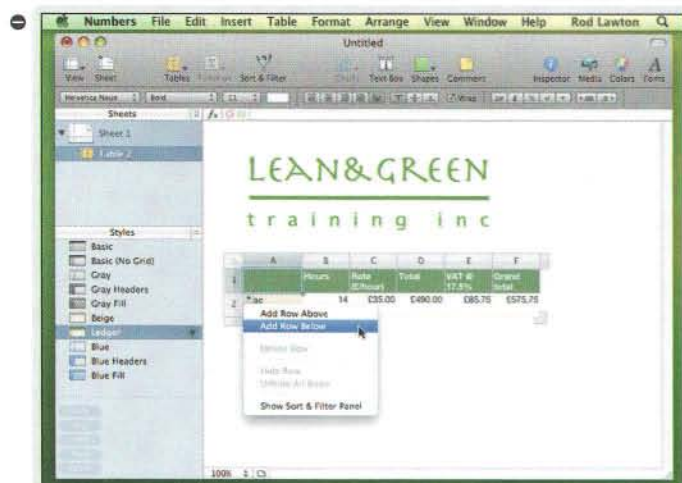
▲ **STEP 04 ADDING ROWS AND COLUMNS** Tables can be easily resized, but this can be done in two different ways, with two different results. To add more rows and columns, select one or more of the cells. This will display the row and column headings, too. Next, drag on the table's bottom-right corner; you can increase or reduce the number of rows and columns.



▲ **STEP 05 RESIZING THE TABLE** What if you want to make the table larger or smaller without changing the number of rows and columns? To do this, click on the box in the table's top-left corner, where the row and column headings intersect. The row and column headings disappear and only the data is visible. Now you can drag on a corner or edge handle to change the size.



▲ **STEP 06 TEXT WRAP AND ROW HEIGHT** By default, text that doesn't fit in the cell width will overlap the cell immediately to the right. Often, though, you'll want the text to wrap onto a new line. To do this, select the cell(s), open the Cells Inspector and check the Wrap Text in Cell box. Next, go to the Table Inspector, look for the Row Height value and click on the Fit button.



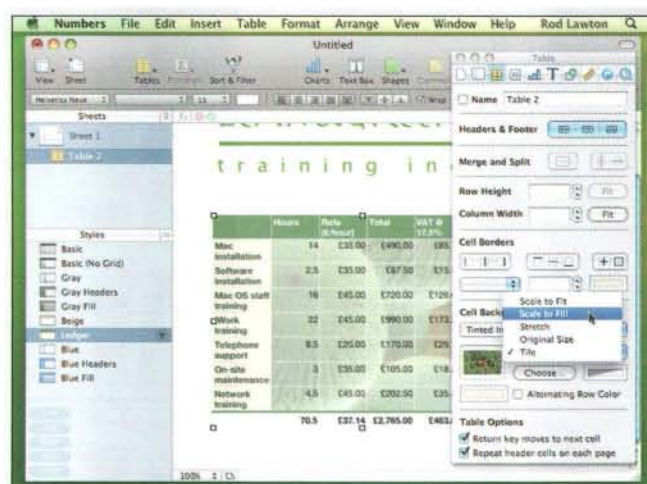
▲ STEP 07 ALTERNATIVE AUTOFILL Some of the columns in our table use formulae to work out fees and charges. One way to apply these formulae in all rows is to select the first and then autofill the rest from that. Numbers has another way: enter one row of data and shrink the table so that there are no empty rows. As you add new rows formulae are copied automatically.



▲ STEP 08 ADDING A FOOTER ROW You'll often want to total the data in a table's columns. You can do this in Numbers by adding a footer. To add a total, click in the footer cell (it will identify the column of data automatically), click the Function button on the toolbar and choose Sum. You can also perform other calculations – for example, to average your hourly rate.



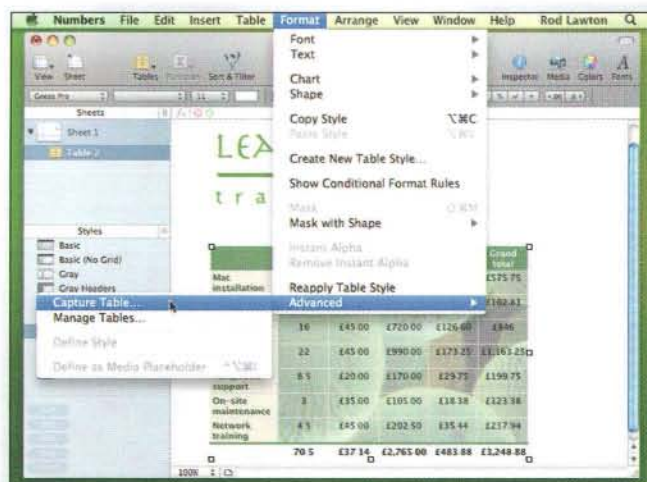
▲ STEP 09 FORMATTING CELLS So far, we've stuck to the standard Ledger table style, but we can customise this table style to reflect our own tastes. To format a cell or cells, first select them and then use the Table Inspector to choose the Cell Background. Here, the background is set to a solid green. The settings for the Cell Borders are directly above.



▲ STEP 10 FORMATTING TABLES To choose a fill for the whole table rather than individual cells, follow step 5 to select the whole table. Next, choose the type of fill you want and then decide how you want it to be scaled. Scale to Fit will leave empty space around the image if its proportions don't match the table's, so choose Scale to Fill instead.



▲ STEP 11 SAVING A NEW TABLE STYLE We've made one more change to our table, changing its font, and now we need to save this style for future use. To do this, click the right-facing arrow alongside the current Table Style in the sidebar and choose Create New Style from the menu. The new style will then appear at the bottom of the list of Table Styles in the sidebar.



▲ STEP 12 CAPTURING A TABLE Remember, Table Styles only store the appearance, not contents – and that includes any formulae or cell formatting. If you want this kept intact, you need to open the Format menu and choose Advanced > Capture Table. This table will now be added to the bottom of the list of tables displayed when you click on the toolbar's Table button.

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There is a wealth of information and help available online. Here are some useful sites that may be worth turning to along with the *MacUser* site.

Apple Support

Apple's pages provide helpful information; try the search options to find specific help.
URL info.apple.com

VersionTracker

Keep abreast of software releases and fixes, and track down new utilities and tools.
URL versiontracker.com

TUNING CAR ENGINES USED TO BE A VERY physical process, using hardware such as vacuum gauges to get the best out of each cylinder. With the widespread adoption of engine management computers, this has changed radically to tweaking the software that makes everything work. Now that vehicle recalls are often for software updates, mechanics increasingly find themselves

using computers. Thankfully, unlike in general computing, automotive computing seems to have proved more resilient and less prone to the effects of bugs, despite some salacious urban myths.

This reliability is not due to any radically different hardware design, but is instead down to the operating systems and software. Real-time operating systems used for such embedded computers are much simpler

because they don't have to support mice, large colour displays, Internet security, or play movies. Neither do they have to load and run all manner of different applications, but do the same job day in, day out. This means that they have more in common with servers, whose sole purpose is to get the job done as reliably as possible.

Developing and maturing Mac OS X Server to the point where it is truly a reliable servant has not been easy for Apple. Getting all the different services running has been the primary aim, and each major version has inevitably brought with it new frustrations. While Leopard Server still has some significant issues that will take a few more iterations to get right, and a crying need for full-bore Zfs support, it has now reached a major milestone that sets it apart from its competition – ease of use.

At a time when Linux is offered in more variants than coffee, and Microsoft is not content with a mere 15 different versions of Windows Server 2003 (plus Home Server) and wants to launch even more new Windows Server 2008 editions, Apple ships a single edition of Mac OS X Server at two price points according to the number of users. You therefore don't need to hire a consultant to work out what you want to purchase in the first place. In smaller businesses this is critical, as once a server is in use, demands made on it tend to increase. If you then have to keep upgrading your server's operating system, it will prove messy and expensive.

When you install Leopard Server, you do have to make some simple choices, but they are neither tricky nor irreversible. At any time, you can customise your settings without having to dig out the installation DVD or purchase upgrades. You can start off with a basic file server, no more complex than AppleShare IP Server used to be, and gradually add more services as you need them. If you want to run a test server with one IP address, then switch it to production mode with a different address, a single command suffices to make all the changes needed. Reasonably competent Mac users should be able to set up most everyday server configurations in minutes, complete with a workgroup Wiki, shared calendars, and all the other bells and whistles.

Running Linux or Windows servers is very reminiscent of my fond memories of tuning cars. We never actually got our vehicles on the road much, as they seemed to need constant attention to ensure that when they did run, they were smooth and quick. But all that tinkering was half the fun. When cold, damp mornings came in the autumn, our cars were a challenge to start, and a frequent excuse for lateness. Now modern sealed-down computer-controlled engines need servicing every couple of years, and are far more green and dependable. I am only thankful that Apple seems to have chosen that latter paradigm for Mac OS X Server. ✕

Howard Oakley is a medical practitioner, researching survival. He has been a Mac software developer since 1989 and has written about computing for even longer.

Simplifying the server

Fine-tuning a server is set to become a thing of the past now that Apple is shipping a single edition of Mac OS X Server.



Words Howard Oakley
Image Danny Bird

BUG BUSTER



Time Machine and AirPort Update 1.0

may prevent the re-installation of 10.5.2 Combo update, as an error message claims that the volume does not meet the requirements. According to MacFixit, you can re-instate this ability by resetting the build version using the Terminal command `sudo defaults write /System/Library/CoreServices/SystemVersion ProductBuildVersion 9C31`. Once the update has been re-applied, Time Machine and AirPort Update 1.0, and subsequent security updates should be installed, too.

Aluminum Keyboard Firmware Update 1.0 fixes unintended repetition of keypresses and other issues, but requires Mac OS X 10.5.2. It's at apple.com/support/downloads/aluminumkeyboardfirmwareupdate10.html.

Front Row 2.1.3 improves compatibility with iTunes 7.6.2. After installing this update, there could be an inadvertent language change. If this occurs, trash Front Row's settings from `~/Library/Preferences/com.apple.frontrow.plist`, log off and log back on again. The update is at apple.com/support/downloads/frontrow213.html.

iTunes 7.6.2 fixes bugs affecting stability and impairing performance. Noise or distortion arising after this update is likely to result from audio plug-ins, such as *Volume Logic* in `~/Library/Audio/Plug-Ins` or `~/Library/Audio/Plug-Ins` and their sub-folders. If affected, remove suspect plug-ins and restart. The update is at apple.com/support/downloads/itunes76.html.

iMac, MacBook, MacBook Pro, and MacBook Air computers should have firmware updates applied. The **iMac EFI Firmware Update 1.3** seems to resolve FireWire

problems, while that for the MacBook Pro fixes problems with the list of available screen resolutions. The updates are at apple.com/support/downloads/imacfirmwareupdate13.html, apple.com/support/downloads/macbookairfirmwareupdate10.html, apple.com/support/downloads/macbookprofirmwareupdate12.html and apple.com/support/downloads/macbookprofirmwareupdate15.html.

QuickTime 7.4.5 fixes various problems, and addresses security issues, including Java applets obtaining elevated privileges, information disclosure when downloading movie files, and vulnerabilities to malicious

movies and VR movies. It's at apple.com/support/downloads/quicktime745forleopard.html, apple.com/support/downloads/quicktime745fortiger.html and apple.com/support/downloads/quicktime745forpanther.html.

Microsoft Office 2004 11.4.1 update can remove Excel on some Macs. The application might have been moved to a hidden folder named *lost_found*, at the root level of the volume, or will have to be re-installed if it has gone missing altogether.

Keynote 4.0.3 fixes stability problems when working with large documents. It's available at apple.com/support/downloads/keynote403.html.



▲ If you have been using Parallels Desktop but found it unstable under Leopard, try VMware Fusion instead. So far it has proved better suited to the changes in Leopard's internals.

Unstable Parallels Desktop

From Mike Petri

Q I had been using Parallels Desktop with success under Mac OS X 10.4, but ever since I upgraded to Mac OS X 10.5.2, I've had some problems with it. Am I missing something?

A Although most people who used Parallels under Mac OS X 10.4 found that it worked very well, there are increasing reports of issues when it is run under Mac OS X 10.5. These probably relate to some of the low-level services that it has to provide, so can lead to an unfortunate general instability.

For most, switching to VMware Fusion has been the best answer, as its current release seems to co-exist very happily with Leopard. Expect Parallels to catch up though, as it works through these issues. Thankfully, VMware provides tools to convert other Windows virtual disk files into its own format, to aid migration.

Migrating a server

From Doug Charlesworth

Q For many years I have got by using an AppleShare IP Server to provide shared file access. Although I have experimented with peer-to-peer sharing under Mac OS X



▲ The 'standard' configuration for Mac OS X Server 10.5.x is likely to prove most suitable for smaller businesses, and is extremely easy to set up and to administer thereafter.

client, this has not been as good. Is Mac OS X Server simple enough to handle this yet, or is it the wrong product?

A The client edition of Mac OS X is not designed to function as a server operating system, and even with third-party products to make file sharing easier, it is still a clumsy and pale shadow of a proper server.

Prior to the release of Leopard Server, the server versions of Mac OS X were excellent, but from installation through to administration were still fairly daunting for the non-specialist. However, Apple has added simple pre-configured presentations of Leopard Server that make it very simple to set up.

If you are migrating from an AppleShare IP Server, you will probably want to opt for a 'standard' configuration, although you may not want to run the mail server or other components. You will then be able to create users, groups and sharepoints for them to access. If you only need support for up to 10 simultaneous user connections (AFP and SMB total), you will be able to buy the significantly cheaper 10-user version – otherwise consider the benefits of an Xserve, with its free copy of the unlimited user version.

Excluding files from backups

From Frank Lyons

Q I work with huge video files, but want to use Time Machine to keep regular backups. Unfortunately, it also backs up my working movies, so the backup fills up within just a couple of days. I have tried turning Time Machine off when working, but this is clumsy. Is there a better way?

A By default, Time Machine does not back up the contents of certain folders intended to hold temporary, scratch or cache files, such as `/tmp` and `Library/Caches`. It maintains a list of other files and folders that it excludes, using metadata.

To view those current settings, type this in Terminal's command line.

```
sudo mdfind "com.apple.backup_excludeltem = 'com.apple.backupd'"
```

That list normally includes iTunes Music Library.xml, iTunes local album artwork, your iPod photo cache, and some application-dependent items such as VMware virtual machines. You can also manually exclude files and folders by opening up its System Preferences pane and clicking on the Options... button. You can then add custom items, such as your video working folders, to ensure that they will not be



▲ If you are working with large files that you do not want backed up, add those folders to Time Machine's list of places that it should ignore, to save space and prolong backup life.

LOGIC PRO IS BUGGING ME

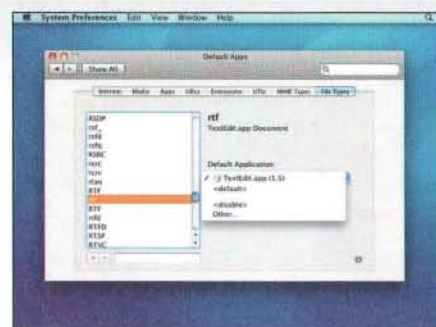
From Chris Marshall

Q All of a sudden, whenever I double-click an .rtf or text file to open it with TextEdit, it no longer opens properly, although I can open these files from within TextEdit. I have tried resetting the Launch Services database using Onyx, but as soon as I run Logic Pro again the problem recurs. What is going on?

A You appear to have discovered a bug, either in Logic Pro or its Pace dongle software, that is corrupting the Launch Services database. This contains the information mapping document types and the default applications that should be used

to open those types. The evidence that you have is fairly compelling, so you should report this bug.

If you want to investigate it further, RC Default App is a useful free pane for System Preferences, from rubicode.com/Software/RCDefaultApp, that lets you inspect all the document mappings in the Launch Services database, and it may help you reset these mappings when you need to. However, until the bug is fixed, the only workaround is to avoid double-clicking these documents, instead drag and drop them onto TextEdit's icon in the Dock.



▲ A neat way of browsing the contents of your Launch Services database, which determines the default application used to open each file type, is with the RC Default Apps pane.

● backed up. Curiously, these are kept in a separate list and will not show up using the metadata search above. In your situation, just add your working folders to the list of items that it does not back up.

Missing disk image

From Ian Runcie

Q I normally back up my MacBook's Users folder to a server using SuperDuper!, but it went wrong and I ended up trying to back it up to a disk image on the same hard disk. This was too large for the hard disk, so I got a message reporting that the disk was full. After putting the huge disk image in the Trash and emptying it, the disk is still reported as being full, even though I can't account for the missing 30GB. Where has this gone?

A Have you been using a trash utility that claims to let you recover items after emptying the Trash? If so, that will probably have kept the disk image.

If not, examine the disk using Disk Utility, and see what it reports in terms of available capacity and used space. It is possible that in overflowing the disk it has become damaged. This could have corrupted the index files on the disk, or possibly damaged

the disk partitioning information. Even if the disk is intact, Mac OS X may not be able to create the various cache and scratch files that it needs to be able to run properly.

Unless another solution becomes obvious, you may get best results by cloning the disk to an empty external drive, initialising the internal hard disk, then cloning the disk back again. That will also thoroughly defragment the contents and free space.

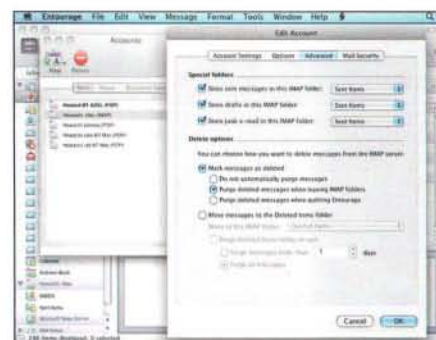
Imap error drains iPhone battery

From John Lockwood

Q I have discovered a problem with my iPhone, which can result in its battery becoming completely drained. This arises from an error that can occur when it communicates with Imap mail servers. Studying the server logs, I have found that the iPhone gets stuck in an infinite loop, repeatedly fetching the same email every time. To break out of this, you need to disconnect the iPhone from the Imap server, either by turning off the iPhone or by forcing the server to disconnect it.

This happens with current versions of QuickMail Pro and Kerio Mail Server; and also occurred with Google's Gmail Imap under iPhone firmware 1.1.3, though this has been fixed in firmware 1.1.4. It is so bad that I have now been forced to turn my Imap email account off completely. Is there anything else that I can do?

A Thank you for this valuable information. When you discover problems like this, it is vital to report them to the vendor, in this case Apple, so that they are aware. There is currently a spate of problems in accessing Imap mail servers. Microsoft Entourage 2008, for instance, has had problems working reliably with Apple's .Mac Imap server, although it seems much happier with traditional Pop and SMTP servers. Although Imap is a slightly more sophisticated



▲ A spate of problems with Imap clients has seen them flatten the battery in iPhones, and here prevents Microsoft Entourage 2008 from connecting to Imap servers such as .Mac.

protocol, it is hard to see why it should cause such problems, and Mail seems to work fine with them all.

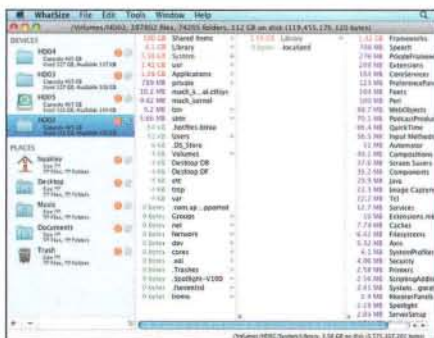
Massive memory leak

From Mike Bird

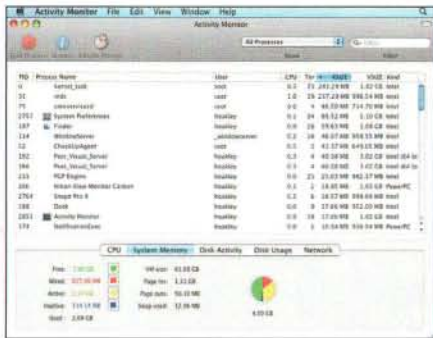
Q I topped up my memory from 1.25GB to 2GB, which is now being correctly reported by my Mac. However, with just Finder and Activity Monitor open, there appears to be a huge memory leak, about 1MB disappearing every second until there is no free memory left. Why is this, and how can I stop it?

A Memory management in Mac OS X is rather strange at times, but it should not be doing this. Your observation suggests there is another process going on in the background that is leaking memory. Check through Activity Monitor's listing of processes to see which is particularly active when this is going on. At that rate it should be easy to spot.

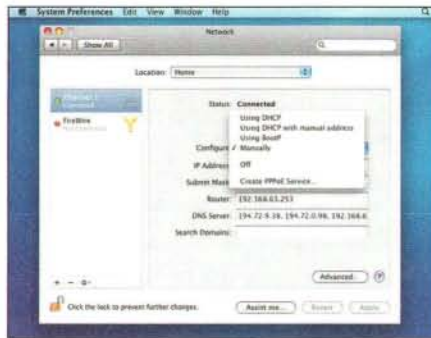
In some versions of Mac OS X, standard services have had memory leaks, but nothing of this size. You should ensure you are running the latest release of the major version of Mac OS. Also check your own



▲ Several utilities, here What Size, can show you where large files are located. This can help you track down apparently missing disk space, but will not address the underlying problem.



▲ If you think you are watching your memory leak away, check memory allocations in the Activity Monitor window. You can sort processes by memory use.



▲ Letting a DHCP server allocate your Mac an IP address may seem simple, but when things go wrong with a network, DHCP can make it tricky to investigate properly.

and additional startup items, and any other non-Apple software that might be loading during startup.

AirPort update affects Internet access

From Richard Hallas

Q I have a G5 desktop Mac and a MacBook Pro that connect through a Netgear DG834PN wireless modem/router – the G5 being wired to it, the notebook working wirelessly. Recently, the notebook stopped connecting to the Internet, although it could still share files over my network.

Checking the Network settings, it had switched to using a self-assigned IP address following installation of the AirPort 7.3.1 update, so was not working properly with the modem-router's DHCP server. Why is this?

A For some strange reason, when you applied that software update your MacBook Pro decided to switch from obtaining its IP address from your modem/router's DHCP server, to assigning it to itself. Your modem/router saw the self-assigned IP address and decided not to try to connect that to the Internet, thus interrupting your connectivity.

Before you decide to press on using DHCP on your network, read the Mac Business Section in this issue, which tackles some of the main problems with DHCP. Despite almost every computer and network appliance wanting you to use DHCP to assign IP addresses, for most this is unwise.

For systems that are regularly on your network, you will find it much simpler to assign them fixed IP addresses, starting from say 192.168.0.1, putting your modem/router at 192.168.0.253. If you do need to cater for other more mobile systems, or visitors, then you should enable a single DHCP server and restrict the pool of IP addresses. For example, keeping fixed IP addresses below .60, and above that dividing line, up to .250, allowing the DHCP server to allocate to guest systems.

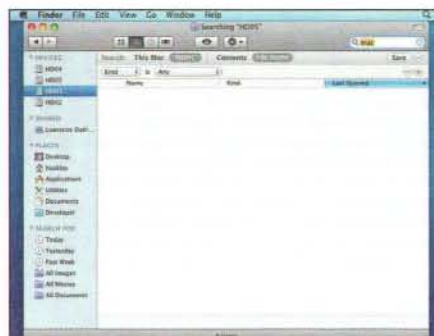
Time Machine takes time finding files

From Peter Walker

Q Comparing times to find lost files in backups, Time Machine has proved very slow over a FireWire 800 connection, while searching a clone made by SuperDuper! was much quicker, even though that backup drive only had FireWire 400. Why does Time Machine take so long to find files?

A Time Machine does not simply create a copy, but keeps that copy updated every hour or so, allowing you to browse Finder representations of all those files at instants in time. But if you were to search for a given file within a Time Machine backup, you would be offered every real and virtual copy of that file over your entire backup, hardly helpful.

Consequently, Apple has wrapped Time Machine into a special interface that makes it easy to step back through old versions of each file. This does not work well with Spotlight, so despite maintaining Spotlight metadata caches on Time Machine backup disks, searches will not use those metadata. If you want to look through your Time Machine backups, you must use its Finder interface instead. This is unlikely to change until someone works out how best to display potentially hundreds of near-identical hits from different versions of a document in a Time Machine backup.



▲ Searching Time Machine backup volumes using Spotlight or Finder's Find is unlikely to return any results. Although Spotlight still maintains indexes of backups, they can't be searched.

THE MAC EMERGENCY ROOM

My Mac won't wake up from sleep



Symptoms

Your Mac will not wake up from sleep, or if it does, it crashes immediately.

Prescription

Restart your Mac. Press the Reset button, or if that is not available, shut down by pressing and holding the Power button and then start up again.

If the screen remains black, the display brightness may be set to the dark extreme, or there could be a problem with your graphics card or display – shut your Mac down, check display connections, and so on.

As a temporary measure, turn sleep off in the Energy Saver pane in System Preferences (Control Panel in Mac OS 9). This should prevent further problems while you sort them out. Check Apple's support site for Rom updates to fix your problems – many older models have had such updates.

In Mac OS 8/9, eliminate extension conflict by turning off all non-essential or suspect items in the Extensions Manager Control Panel, then restart your Mac. Disconnect suspect external devices and disable their drivers. Some older models may never sleep reliably when connected to USB devices. Blue and white G3 desktop models may also be prone to persistent USB issues that can interact with waking from sleep. Under Mac OS X, some older PCI Scsi cards cause problems with sleeping; check the card manufacturer's support site for information and updates.

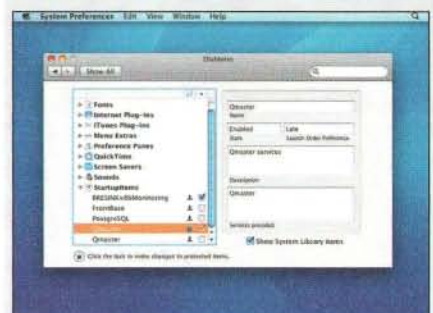
If using Mac OS X, update to the latest available version of the OS. When updating, try using the latest Combo updater. If that still doesn't work, throw the Energy Saver pane away (from /System/Library/PreferencePanes), then re-install the Combo updater. When using Mac OS X, you may find it more reliable to use a screensaver.

Further Info

Sleep and Energy Saver problems are frequently the subject of reports and discussion at MacFixit, macfixit.com, and MacInTouch, at macintouch.com.



▲ Although it's wise to sleep the display of Macs, using the Energy Saver pane in System Preferences, try to avoid sleeping disks and computers in desktop models.



▲ Mac OS X is spared the extensions problem of Mac OS 9, but Diablotin can still be a useful tool for disabling troublesome startup items.

MAC BUSINESS

Most computers and network devices install with DHCP enabled, leaving you to straighten them out later. Does this spare us having to mess with IP addresses, or does it merely create worse problems?

WISE WORDS

Each network port of a computer or device attached to a network needs a unique IP address. This can be fixed (manually) or dynamic (usually from a DHCP server).

Managing static IP addresses is not difficult unless your network has frequent visitors. Out of range IP addresses will be unreachable, but can be readily corrected.

Many network devices include their own DHCP servers, and it is easy to leave more than one server running. This is inadvisable.

Dynamic IP addresses are leased out for a period of time. If a computer is shut down, it may lose its previous IP address, which could be leased out to another computer.

When DHCP is in effect, diagnosing network problems can be much more difficult, as you need to establish IP addresses for each device.

Ideally, if you use DHCP you should dynamically link its assigned addresses to a secure local DNS server.

ZERO CONFIGURATION NETWORKING

If all the computers and devices on your network support compatible zero configuration (Zeroconf) methods, you don't even need to use DHCP to allocate IP addresses automatically. Part of Apple's Bonjour uses a technique known as link-local address allocation. Intended mainly for small and ad hoc networks, and those whose DHCP server has become faulty, it uses a fourth block of IP addresses that has been specially allocated for this purpose — 169.254.1.0 to 169.254.255.255.

If you connect a Mac with Bonjour enabled but no fixed IP address to a network

Every computer and addressable device connected to a network must have a locally unique identifier by which it can be addressed using the network protocol. As almost all networks now rely on the Internet Protocol (IP), each network port is associated with an IP address. Until IPv6 becomes widely adopted (see *MacUser* 17 August 2007, p90), the great majority of us remain with IPv4 addresses, such as 24.36.48.128 – four numbers, each of which can range from 0 to 255.

Because few of us have been allocated globally applicable IP addresses for every device on our networks, it is recommended for local network IP addresses to be chosen from blocks allocated for use by private networks. These include 10.0.0.0-10.255.255.255, 172.16.0.0-172.31.255.255, and currently the most popular block of 192.168.0.0-192.168.255.255. There are two main ways in which IP addresses can be assigned from those blocks to the computers and devices on a network; statically, being set in software for that network port; or dynamically, being allocated to that network port by a specialised server running the Dynamic Host Configuration Protocol (DHCP).

In reality, it's not hard to manage your own static IP addresses. All you need is a record of which IP

without a DHCP server, it should pick an address within that special block, using a pseudo-random process. It then broadcasts over the network a request for who already owns the address it has chosen. If no device admits to being its owner, the Mac will assume that IP address, finally announcing itself as its owner. These exchanges are accomplished using broadcast packets under the Address Resolution Protocol (ARP), and are easy to spot using a packet sniffer.

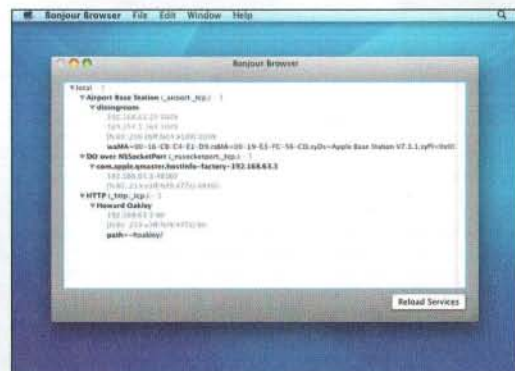
Users want to be able to refer to different computers, and other networked devices, using words rather than IP

addresses. For that, Bonjour provides multicast DNS (mDNS) instead of relying on a DNS server. Local domains are distinguished by the .local suffix. Queries to resolve mDNS names by reverse lookup are sent to a standard IP address, 224.0.0.251.

The other main local scheme that forms part of Bonjour is DNS Service Discovery (DNS-SD), which allows a networked computer to discover what services of a given type, such as printing, music, photo and other sharing service, are available. All told, link-local IP allocation mDNS and DNS-SD are in a different league from DHCP.

address is allocated to which device. When a new computer or device is added, you need to decide which unused IP address you will allocate to it, and then configure the device to use that address. If you inadvertently give the same IP address to two different ports on the network, the consequences are very messy but usually easy to spot. If you inadvertently give an IP address that is outside the range of the network, such as 192.168.255.2 on a network using 192.168.0.x addresses with a 255.255.255.0 mask, then that device will be unable to network properly. Again that is normally easy to spot and correct.

But many network devices, such as modem/routers, wireless access points, and most computers, by default are configured to use (or serve) DHCP. The aim is to reduce the workload of system administrators and allow devices to be added to networks with minimal or no manual configurations. For simple networks, this may be true. Hook a few Macs up with a single modem/router, and the latter's default DHCP server will assign IP addresses to the Macs, which will use them in the same way they would if these addresses had been allocated by a dedicated DHCP server. When someone visits and connects their MacBook to your network, provided that it also expects to obtain



▲ Bonjour can allocate IP addresses without DHCP, and associate those addresses with domain names using mDNS. However, this is a prelude to discovering services rather than systems.

its IP address from a DHCP server, it will be allocated an address within the private network block being used by your DHCP server and all the other networked devices, and will communicate without any need for manual configuration.

The snags with DHCP come when you make your network more complex, or when you need to know IP addresses to sort out networking problems (or for any other reason).

If you add a wireless access point, or a second modem/router, then the chances are that it too will run its own DHCP server by default. Its behaviour will thus be unpredictable. It could (perhaps should) recognise that there is already a DHCP server active, obtain its own local IP address from that, and turn its DHCP service off. However, if that does not work, it could wreak havoc, and prove very hard to isolate and fix, particularly if you were not aware that it ran its own DHCP server.

If you add another network segment, say by adding a wireless access point to a wired network and then connecting computers wirelessly to that access point, behaviour can also become unpredictable. For example, the access point may act as the DHCP server for anything connected wirelessly, while your main DHCP server in a modem/router could be operating independently. This can result in the two network segments, wired and wireless, being partially separated, with limited access between the segments but perhaps preventing computers that are connected wirelessly from accessing the Internet through the modem-router. Again this can be tough to diagnose unless you know what you are looking for.

The DHCP standard makes allowance for allocated IP addresses to be fairly consistent. If you use DHCP over a static wired network, the systems that are left turned on should not change IP address from one week to the next. When a new device is connected, and it obtains an IP address allocated from the DHCP server, this comes with a lease period that determines how long it retains that address. If that device is working properly, it will negotiate a new lease on its IP address before the old lease expires, and will thus retain the same address, and suffer no break in connectivity. However, if it releases its lease, perhaps by being shut down, and another device then requests an IP address, the first device is likely to be given a different IP address when it is next started up. DHCP, no matter how well it is managed, thus leads to changing IP addresses. When you connect your MacBook to the network on Monday, it might be given the address of 192.168.0.9, but on Tuesday it could be 192.168.0.6. The only way to find out its IP address is to check, either by interrogating the DHCP server or by inspecting the IP address on the computer.

Any actions that require you to know IP addresses will thus become more complex when your network is running DHCP. If you are experiencing problems accessing a file sharing server, pinging IP addresses requires you to check them first, in case they have

MIXING FIXED IP ADDRESSES AND DHCP

Provided that your local network is well protected behind an effective firewall, and thus extremely unlikely to be vulnerable to attacks on a DHCP server within the local network, you can mix and match DHCP with fixed IP addresses to overcome many of the problems inherent in an all-DHCP configuration.

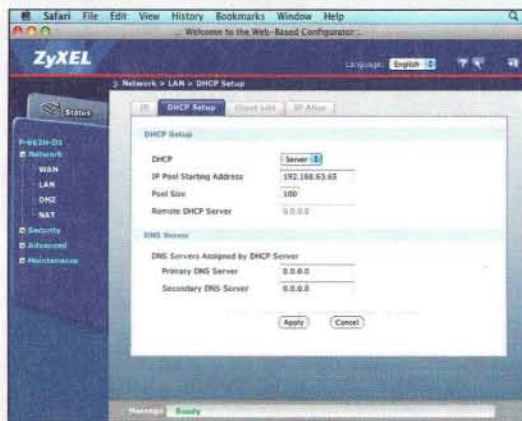
The first information that you need to establish is which devices and computers can act as DHCP servers. Although you could enable the built-in bootpd service (by default disabled in all recent releases of Mac OS X client) to serve DHCP from a client Mac, you will probably find it simpler and more effective to use the server built into a modem/

router, firewall device, wireless access point or base station, or Mac OS X Server. If the latter, be circumspect if the server does not sit wholly within your network but in the DMZ. Check each possible server out to discover how easy and flexible it is to configure. In most cases, you should find that offered in a decent modem-router is best for this purpose.

Allocate that DHCP server device a high fixed IP address in the block that you wish to use. Most administrators now opt for 192.168.x.x addresses, but do not feel bound to adhere to the standard 192.168.0.x block, rather choose something like 192.168.100.x, so making your server fixed at

192.168.100.253. Give other network devices and appliances, but not printers or computers, fixed addresses just below that, down to around 192.168.100.240. Then allocate fixed addresses to your static computers, printers, networked storage, and the like, from 192.168.100.1 upwards, leaving a gap from 192.168.100.50 or so.

Finally, configure the DHCP server to allocate dynamic IP addresses only in that unallocated area, between about 192.168.100.50 and 192.168.100.239. This gives plenty of scope for visitors, and makes it easy for you to distinguish them from static systems.



◀ Most DHCP servers can be configured to work with fixed as well as dynamically allocated IP addresses, most popularly in their browser configuration screens.

WISE WORDS

Using DHCP-assigned IP addresses can also make Nat, VPN and other popular networking techniques more complicated.

DHCP is not designed for security. An intruder could readily set up a bogus DHCP server, or use DHCP to obtain a local network IP address. It is also vulnerable to a DoS attack that would degrade networking.

You can readily mix and match static IP addresses, for fixed computers and other devices on your network, with dynamic allocation for visitors. Set aside a block from about 192.168.x.50 to 192.168.x.239 for dynamic addressing.

Link-local address allocation, as used in Bonjour, is ideal for small, ad hoc networks, or to deal with faulty DHCP servers. It does not require a DHCP or any other server.

Bonjour also provides mDNS to associate IP addresses with local domain names, and DNS Service Discovery to find out what services are available.

changed. The DHCP standard offers an elegant solution to this problem, suggesting that DHCP-assigned addresses should be dynamically linked to a secure local DNS server – something that a perceptive administrator might achieve with Mac OS X Server, but is otherwise very seldom done. If you want to use smart Network Address Translation (Nat) in your modem/router, or VPN through a firewall, or many other modern techniques popularised since DHCP was standardised in 1993, then you will find it an obstacle.

Finally, DHCP is inherently insecure, and gets in the way of some important security measures. DHCP servers are not hard to set up, and the prospect of an intruder setting up their own unauthorised DHCP server is truly worrying. This could enable the intruder, for example, to configure all your DHCP clients to access a poisoned DNS server. Alternatively, an intruder could masquerade as a legitimate client computer, and obtain a local IP address from your DHCP server, to pose as a networked system. There is also a well-known denial of service (DoS) attack on a network in which the intruder floods your DHCP server with requests for IP addresses, exhausts its pool of addresses, and disrupts your network. DHCP is an old protocol that is struggling for justification in the modern world. ☒

Send in the lawyers

With the bad feeling generated by the clampdown on the illegal sharing of material, it seems the lawyers are the only real winners



Words Adam Banks
Image Danny Bird

HAVE YOU EVER HEARD OF A COMPUTER game called Two Worlds? Nor had I, until last month. We weren't missing much by all accounts – outside its publisher's native Germany, reviews were lukewarm. So why are hundreds of people in the UK being forced to pay £600 for it?

The demands are coming from Topware, part of Zuxxez Entertainment AG, a small company based in Karlsruhe. Karlsruhe is historically the centre of the German justice system, and perhaps it was this that inspired Topware's novel response to the illicit copying that's always plagued the games industry. Not content with tens of thousands of retail sales of Two Worlds, Topware monitored peer-to-peer (P2P) file sharing networks to see who was swapping it for free. Using court orders to make ISPs disclose personal information, they identified users from

whom others were copying the game and then they sued them.

According to Topware's CEO, Dirk P Hassinger, they're going after 1000 sharers in the UK and even more in Germany – up to 80,000 in total. Each is asked to pay €300, or £600 in the UK – 'legal costs' are apparently higher here – with the threat of court

action if they fail to comply. Hassinger, who admits P2P users may not even realise that they're acting as a download source, says a case that reached court in Germany resulted in more than €20,000 (about £15,837) being awarded. No matter that these users gained nothing from file sharing and may never have run the £20 game.

After I was contacted by a man who'd received a demand for £600 despite having no knowledge of Two Worlds, I tried to speak to Davenport Lyons, Topware's London solicitors and the recipients of an undisclosed portion of those 'legal costs'. I wanted to clarify a few details and ask if they thought this was in the public interest. But the person who answered the phone refused even to tell me his name.

Journalists aren't fond of that sort of thing, so I pushed. Davenport Lyons still didn't call me, but their heavyweight PR company, Bell Pottinger, did. Through them, I obtained some answers that were short on facts and long on criticism of my attitude. 'We are an open and transparent organisation,' huffed another unnamed spokesperson, declining

to be quoted or interviewed or to meet me in the car park. He, she or it did confirm that they'd already approached 500 users last year in respect of Dream Pinball, another Topware game, of which five were due in court. '[Our] client has gained little financial return... but we believe the deterrent effect has been substantial.' Oh, that's all right then. But if you wanted to deter people, wouldn't you try to publicise the wrongs of file swapping rather than silently grabbing cash off random individuals?

This kind of guerrilla action is worrying enough, but meanwhile the bigger guns are being rolled out. The US Anti-Counterfeiting Trade Agreement (ACTA) is an international treaty that has naff-all to do with counterfeiting and everything to do with Big Copyright versus little you. Customs officers, for example, could start impounding and destroying infringing materials, such as a MacBook with an unlicensed MP3 on it. The civil liberties group IP Justice characterises ACTA as a 'misguided effort to increase government spying and ratchet up IPR enforcement at public expense', and calls for a 'distinction between the types of infringements that actually do cause the public serious harm... and those that only impact profit margins.'

Among the politicians backing ACTA is Howard Berman, a supposedly liberal Democrat from California. In 2006, his re-election campaign received \$180,000 from the entertainment industry (for which read Time Warner, News Corp and Sony), and you only get one guess where their interest lies.

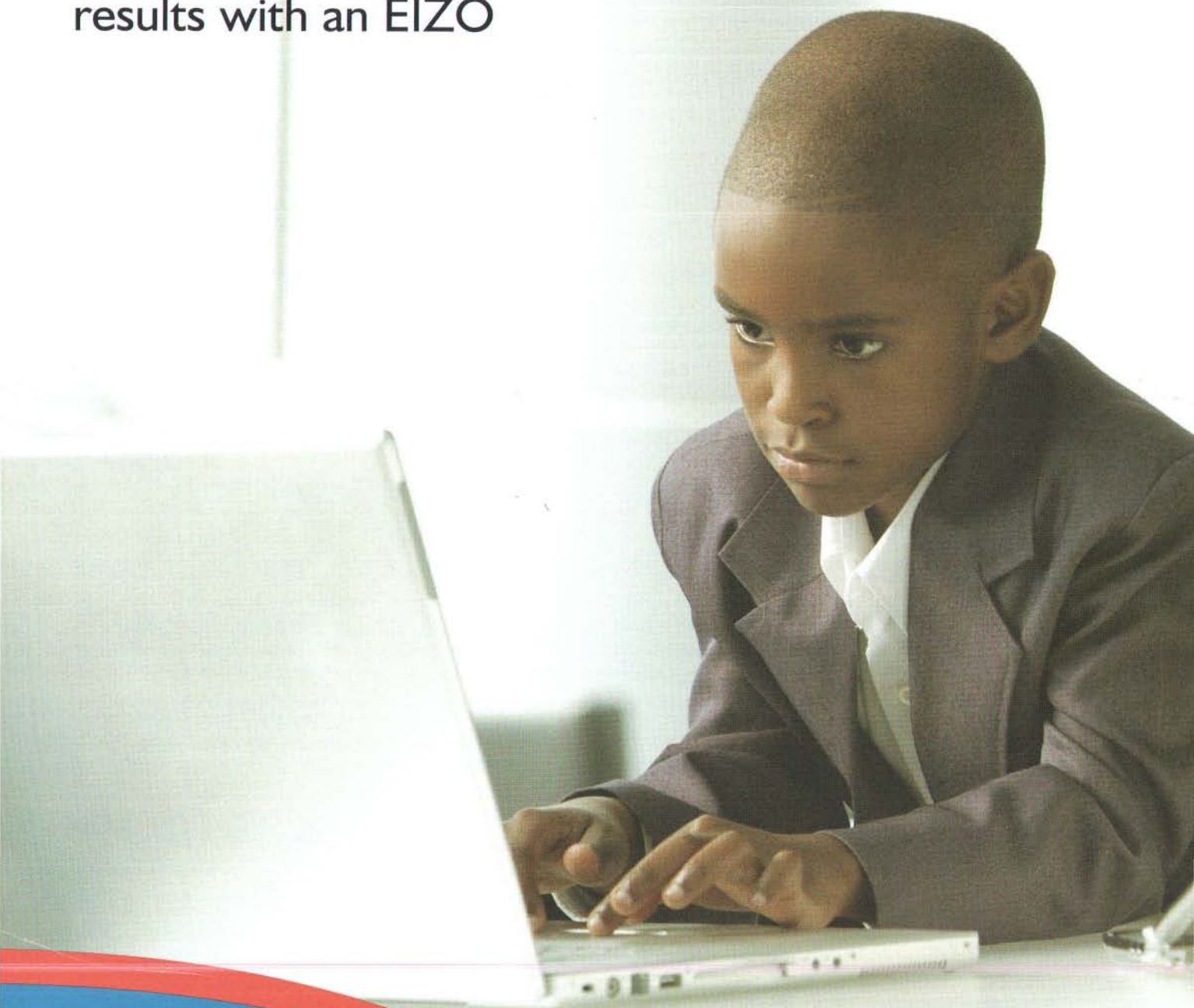
Thus destabilised, otherwise intelligent people can be convinced that any limit on intellectual property enforcement is a threat to the economy. Unless every infringer is mercilessly crushed, musicians won't play, movie people won't work, and software companies won't sit around having meetings about which features they're going to leave out of version 11, so that they've still got something to sell us in version 12.

But why does it matter if music gets played, movies made and so forth? Presumably because it's important that people should be able to enjoy those things. And in that case, we need to protect our right to that enjoyment, and prevent it being shorn and shackled on the whim of the pen-pushers who masquerade as the guardians of others' creations.

Not to mention our right to get through the day without some slick lawyer mugging us for several times the money that we never owed their self-righteous pickpocket of a client in the first place.

Adam Banks never liked games with orcs in anyway.

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